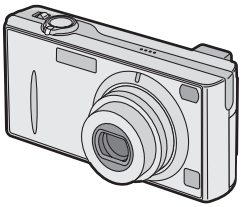
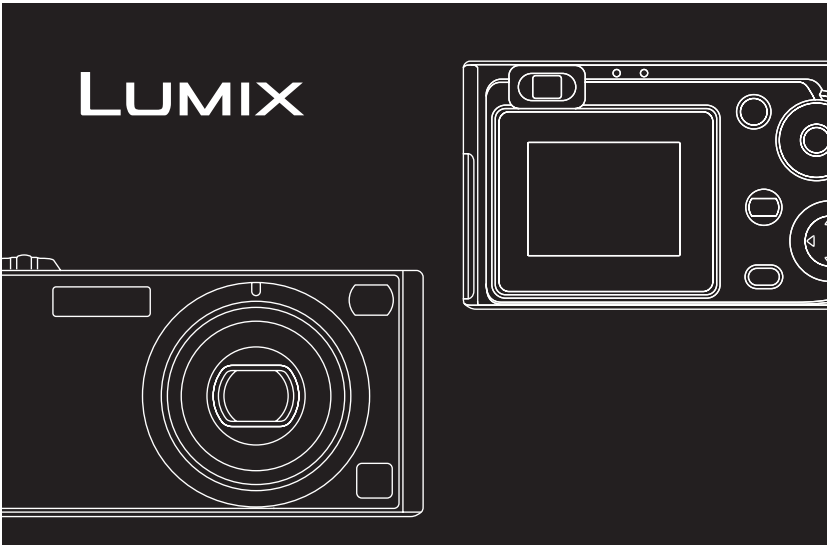
Panasonic

Digital Camera

Operating Instructions



Model No. DMC-FX5GN
DMC-FX1GN



Before use, please read these instructions completely.

LEICA
DC VARIO-ELMARIT

VQT0G32

Dear Customer,
We would like to take this opportunity to thank you for purchasing this Panasonic Digital Camera. Please read these Operating Instructions carefully and keep them handy for future reference.

Information for Your Safety

WARNING
TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD AND ANNOYING INTERFERENCE, USE ONLY THE RECOMMENDED ACCESSORIES AND DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE. DO NOT REMOVE THE COVER (OR BACK); THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Carefully observe copyright laws. Recording of pre-recorded tapes or discs or other published or broadcast material for purposes other than your own private use may infringe copyright laws. Even for the purpose of private use, recording of certain material may be restricted.

- Please note that the actual controls and components, menu items, etc. of your Digital Camera may look somewhat different from those shown in the illustrations in these Operating Instructions.
- SD Logo is a trademark.
- Other names, company names, and product names printed in these instructions are trademarks or registered trademarks of the companies concerned.

THE SOCKET OUTLET SHALL BE INSTALLED NEAR THE EQUIPMENT AND SHALL BE EASILY ACCESSIBLE.

CAUTION
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Extremely high precision technology is employed to produce the LCD monitor screen. The result is more than 99.99% effective pixels with a mere 0.01% of the pixels inactive or always lit. However, this is not a malfunction and does not affect the recorded pictures.

IF THE POWER CORD OF THIS EQUIPMENT IS DAMAGED, IT MUST BE REPLACED WITH AN ELECTRICALLY APPROVED POWER CORD.

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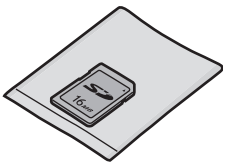
Standard Accessories

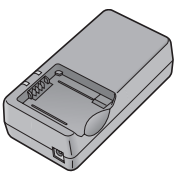
Before using your camera, check the contents.

■ **SD Memory Card (16 MB)**
RP-SD016B
(In the text, it is indicated as “Card”)

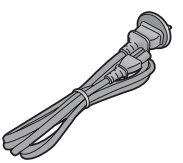


■ **Battery Pack**
CGA-S001E
(In the text, it is indicated as “Battery”)

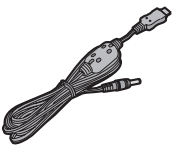
■ **Battery Charger/AC Adaptor**
DE-929B
(In the text, it is indicated as “AC Adaptor”)



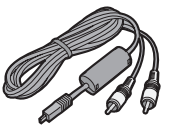
■ **AC Cable**
K2CJ2DA00002 or K2CJ2DA00011



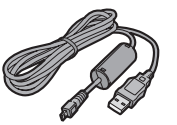
■ **DC Cable**
K2GH2DZ00001



■ **AV Cable**
K1HB08CD0003



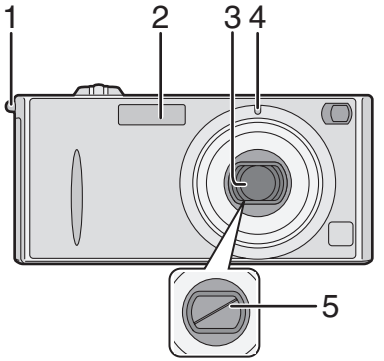
■ **USB Connection Cable**
K1HB08CD0004



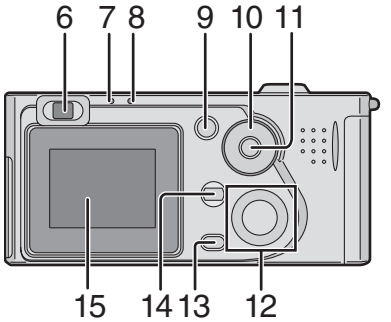
■ **CD-ROM**

■ **Strap**
VFC4033

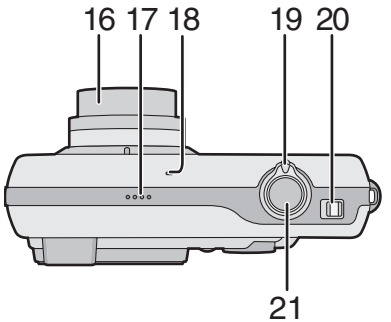
Names of the Components



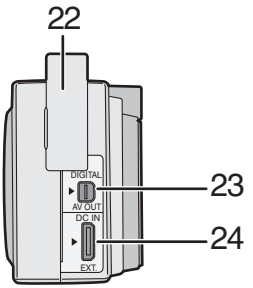
1 Strap Eyelet (P18)
2 Flash
3 Lens
4 Self-timer Indicator (P41, 53)
5 Lens Cover



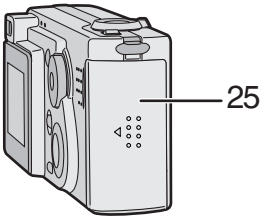
6 Optical Finder
7 Flash/Access Indicator (P15, 29, 38)
8 Status Indicator (P29)
9 [DISPLAY] Button (P22, 25, 33, 80)
10 Mode Dial (P27)
11 Single/Burst Mode Button (P42)
12 Cursor buttons
◄/Self-timer Button (P41)
▼/REVIEW/SET Button (P34)
►/Flash Mode Button (P36)
▲/Exposure Compensation (P39)/ Auto Bracket (P40)/White Balance Fine Adjustment (P58) Button
13 Delete (P46)/[FOCUS] (P64) Button
14 [MENU] Button (P21)
15 LCD Monitor (P25, 33, 103)



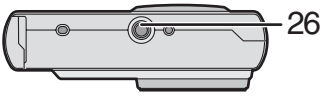
16 Lens Barrel (P30)
17 Speaker (P73)
18 Microphone (P54, 63)
19 Zoom Lever (P35, 66)
20 Power Switch (P9, 28)
21 Shutter Button (P9, 28)



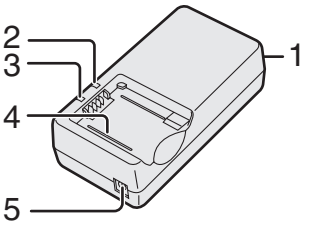
22 Terminal Door
23 [DIGITAL] (P94, 95, 97)/ [AV OUT] (P91) Socket
24 [DC IN/EXT.] Socket (P14)



25 Card/Battery Door (P12, 16)



26 Tripod Receptacle



■ **Battery Charger/AC Adaptor (P10, 14)**

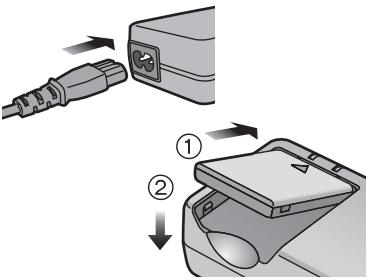
1 [AC IN~] Terminal
2 [POWER] Indicator
3 [CHARGE] Indicator
4 Battery Attachment Part
5 [DC OUT] Terminal

Quick Guide

- Charge the battery before using.
- Prepare the Camera/AC cable/Battery/AC adaptor/Card.
- Check that the camera is turned off and that the lens is retracted.

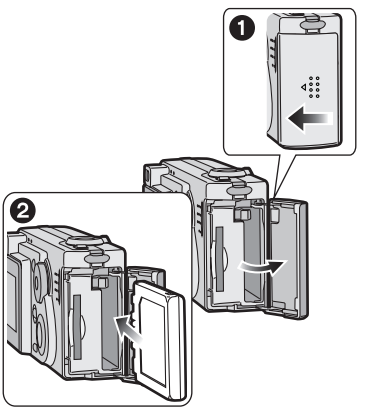
■ Preparation

1 Charge the battery. (P10)

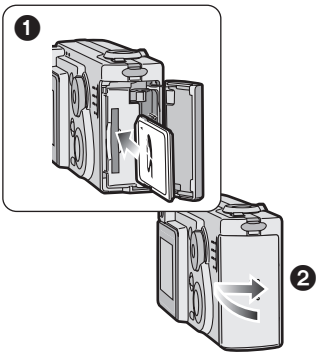


- The battery cannot be charged when the DC cable is connected to the AC adaptor.

2 ❶ Open the card/battery door.
❷ Insert the battery. (P12)

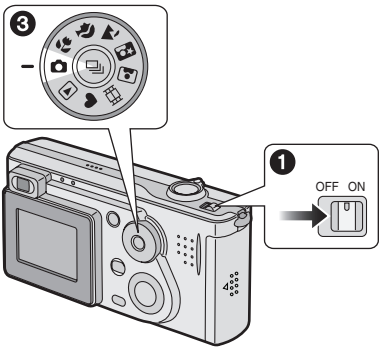


3 ❶ Insert the card. (P16)
❷ Close the card/battery door.

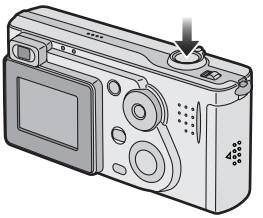


■ Recording

4 ❶ **Turn the camera on.**
❷ **Set the clock. (P19)**
❸ **Select Normal picture mode [ ].**

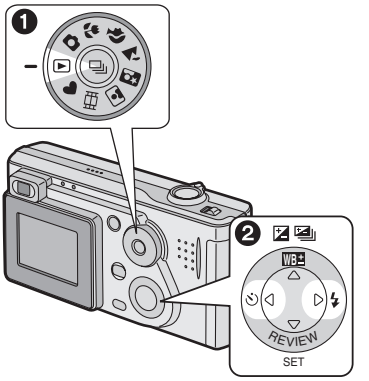


5 **Take a picture. (P28)**



■ Playback

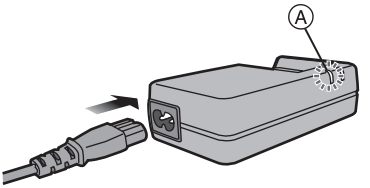
6 ❶ **Select Playback mode [ ].**
❷ **Select the picture you want to view. (P43)**



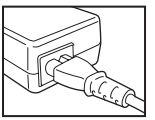
Charging the Battery

Charge the battery before using.

1 Connect the AC cable.

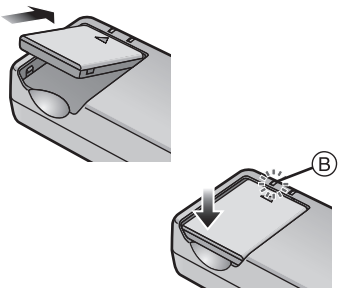


- The AC cable does not fit entirely into the AC input terminal. A gap will remain as shown below.



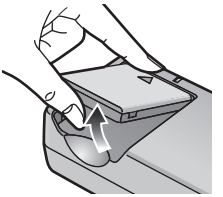
- The [POWER] Indicator Ⓐ lights.
- The battery cannot be charged when the DC cable is connected to the AC adaptor.

2 Attach the battery to the AC adaptor.



- When the [CHARGE] Indicator Ⓑ lights, charging starts.
- When the [CHARGE] Indicator Ⓑ turns off (in about 90 minutes), charging is finished.

3 Detach the battery.



◇***Suggestions/Tips*** ◇

- After use, be sure to disconnect the AC cable.
- The battery becomes warm after use/ charge or during charge. The camera also becomes warm during use. However, it is not a malfunction.
- **The battery and AC adaptor are designed only for this camera. Do not use them with any other equipment.**
- **Do not disassemble or alter the AC adaptor.**

About the Battery

■ Battery indication

The remaining battery power appears on the screen.
(This does not appear when using AC adaptor.)

(Blinks in red): Recharge or replace the battery.

■ Charging time and available recording time

Measured under the following conditions:
- Temperature: 25°C/Humidity: 60%
- Recording once every 30 seconds, flash every other record.
- Using the battery (supplied) and 16 MB SD Memory Card (supplied) [Picture size: 2304×1728 (DMC-FX5)/2048×1536 (DMC-FX1)/Quality: Fine (When deleting all pictures after full use)].

	Charging time	Continuous recording/playback time (recordable number)
Supplied battery	Approx. 90 min.	Recording with LCD monitor on Approx. 60 min. (equal to 120 still pictures)
		Recording with LCD monitor off Approx. 120 min. (equal to 240 still pictures)
		Playback time Approx. 100 min.

The recording time (recordable number) and playback time depend on the condition.

■ Charging environment and charging error

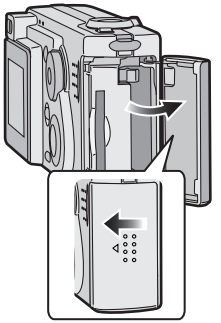
- Charge the battery under temperature of 10 – 35°C.
  (The battery should also be the same temperature.)
- When charging starts, the [CHARGE] Indicator lights.
  If the charging error occurs, the [CHARGE] Indicator blinks at about 1 second cycles.
  In this case, disconnect the AC adaptor from the electrical outlet, remove the battery and ensure both room and battery temperature are not too low or high and then charge it again.
  If the problem persists, consult the dealer or your nearest servicentre.

Inserting the Battery

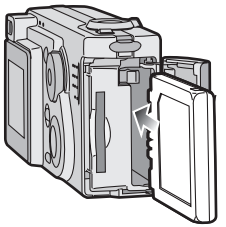
Preparation

• Check that the camera is turned off and that the lens is retracted.

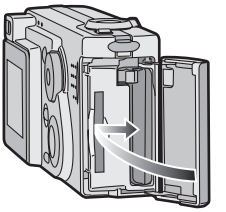
1 Open the card/battery door.



2 Insert the charged battery until it clicks.



3 Close the card/battery door.

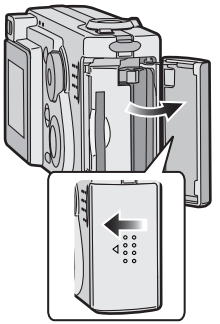


Removing the Battery

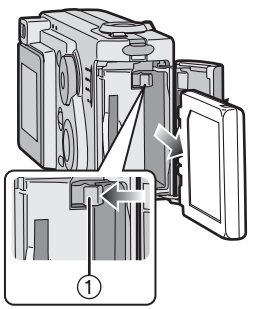
Preparation

- Check that the camera is turned off and that the lens is retracted.

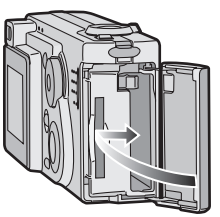
1 Open the card/battery door.



2 Slide the lock ① to remove the battery.



3 Close the card/battery door.



◇***Suggestions/Tips*** ◇

- If you will not use the camera for a long time, remove the battery.
- After the fully charged battery has been inserted for more than 48 hours, the clock setting is stored (in the camera) for 3 months after the battery was removed. (The time may be shorter if the battery is not charged sufficiently.)
  If more than 3 months has passed, the clock setting will be lost. In this case, set the clock again. (P19)
- **Do not remove the card or the battery during the access to the card (P15).**
- **The supplied battery is designed only for this camera. Do not use it with any other equipment.**
- **Be sure to remove the battery after the status indicator is turned off. Otherwise, the setting may be cleared.**

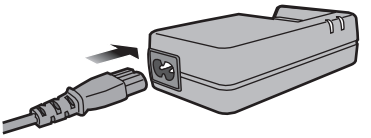
Using the AC Adaptor

You can use the camera without worrying about battery discharge by connecting to an AC adaptor.

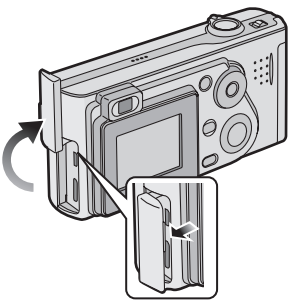
Preparation

• Check that the camera is turned off and that the lens is retracted.

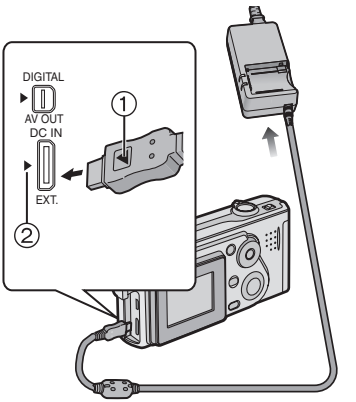
1 Connect the AC cable.



2 Open the terminal door.



3 Connect the DC cable.



• Align the [◄] mark ① on the DC cable and the [►] mark ② on the [DC IN] socket.

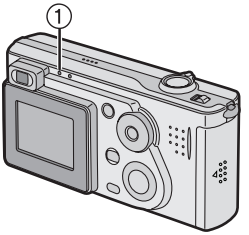
◇***Suggestions/Tips*** ◇

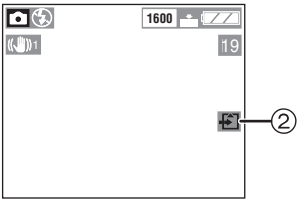
- Use the supplied DC cable. If you use other DC cables, it may cause a malfunction.
- The camera becomes warm during use. This is not a malfunction.
- Disconnect the AC adaptor and DC cable when the camera is not in use.
- The battery cannot be charged in the camera even if the AC adaptor is connected.

About the Card

■ Access to the card

While the card is accessed, the flash/access indicator ① and card access indication ② light.





When the flash/access indicator ① and card access indication ② light, do not:

- turn the camera off.
- remove the battery or the card.
- disconnect the DC cable if you use the AC adaptor.

The card and the card contents may be damaged and the camera may not operate normally.

It is possible that data stored on the card can be damaged due to accidental erasure, static electricity, electrical noise or a defective card. We recommend storing precious data to your PC's hard drive. (P94, 95)

■ SD Memory Card (supplied) and MultiMediaCard (optional)

The SD Memory Card and MultiMediaCard are small, lightweight, removable external memory cards. The reading/writing speed of an SD Memory Card is fast. The SD Memory Card is equipped with a Write-Protect switch that can inhibit writing and formatting a card. (When the switch is slid to the [LOCK] side, it is not possible to write or delete data on the card and format it. When the switch is unlocked, these functions become available.)

SD Memory Card

MultiMediaCard

◇***Suggestions/Tips***◇

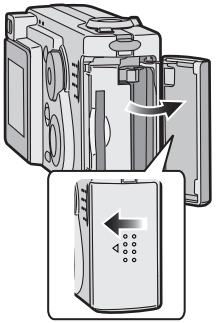
- The reading/writing speed of a MultiMediaCard is slower than an SD Memory Card. When a MultiMediaCard is used, the performance of certain features may be slightly slower than advertised.
- After recording motion images using the MultiMediaCard, the flash/access indicator and card access indication may appear for a while, but this is not a malfunction.
- Keep the Memory Card out of reach of children to prevent swallowing.

Inserting the Card

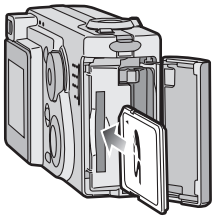
Preparation

• Check that the camera is turned off and that the lens is retracted.

1 Open the card/battery door.

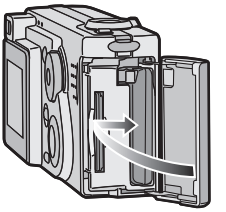


2 Insert the card all the way in until it clicks.



• Insert the card, pressing gently until it locks in place. If the card will not insert freely, it may be reversed. Do not force the card.
• Do not touch the connection terminals on the back side of the card.

3 Close the card/battery door.

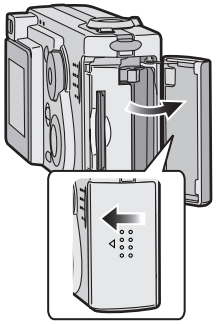


Removing the Card

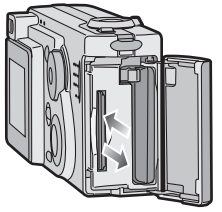
Preparation

- Check that the camera is turned off and that the lens is retracted.

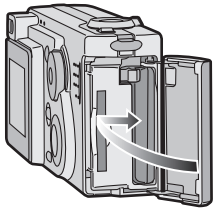
1 Open the card/battery door.



2 Push the card until it clicks, then pull the card out upright.



3 Close the card/battery door.

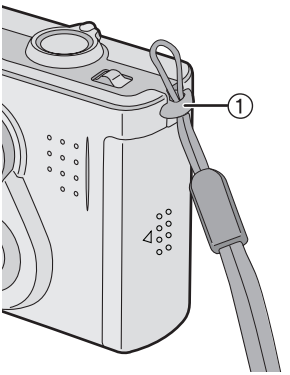


◇***Suggestions/Tips*** ◇

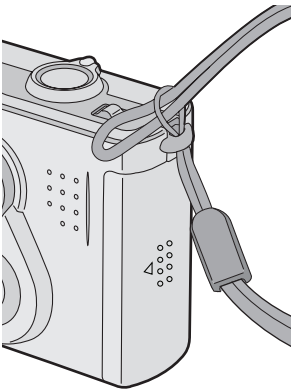
- The card may be damaged if it is removed while the camera is on.
- If the card/battery door cannot be completely closed, remove the card and insert it again.
- If the card cannot be fully inserted, check the direction of the card.
- We recommend using Panasonic's SD Memory Card. (Use only the genuine card.)
- The card may be damaged if it is not fully inserted.

Attaching the Strap

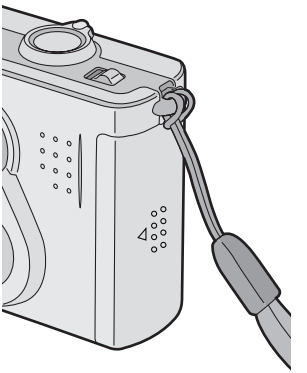
1 Pass the top of the strap through the strap eyelet ①.



2 Pass the opposite side of the strap through its ring shaped part.



3 Pull the strap.



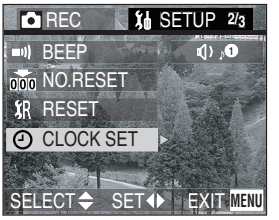
Setting the Date/Time (Clock Set)

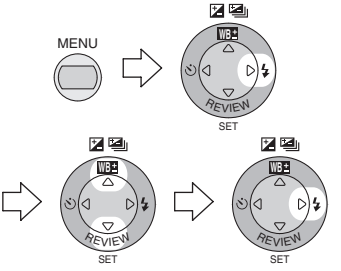
■ Initial setting

The clock is not set when the camera is shipped. When you turn the camera on, the clock setting screen appears.

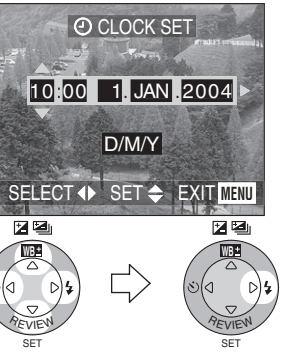
When pressing the [MENU] button, the screen shown in step 2 appears. Set the clock on it.

1 Select [CLOCK SET] from the [SETUP] menu. (P21)



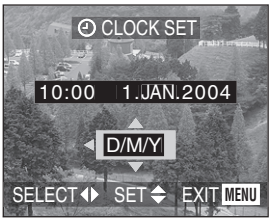


2 Set date and time.



- ◀/▶: Select the desired item.
- ▲/▼: Set date and time.

3 Select [M/D/Y], [D/M/Y] or [Y/M/D].



- Close the menu by pressing the [MENU] button 2 times after finishing the setting.
- Check if the clock setting is correct, after turning the camera off and on.

■ Date Printing

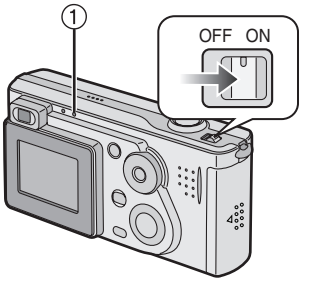
- You can set the date printing in DPOF print setting on this camera. (P80)
- Using the supplied software, [SD Viewer for DSC], it is possible to have the date imprinted on the picture. For details, please read the supplied operating instructions for PC connection.
- When you ask photo studios for printing, be sure to order the printing of the date. For further information, ask a photo studio. Depending on the studio, it may not be printed.

◇*Suggestions/Tips*◇

- You can set the year from 2003 to 2099. The 24-hour system is used.
- After the fully charged battery has been inserted for more than 48 hours, the clock setting is stored (in the camera) for 3 months after the battery was removed. (The time may be shorter if the battery is not charged sufficiently.)
  If more than 3 months has passed, the clock setting will be lost. In this case, set the clock again.

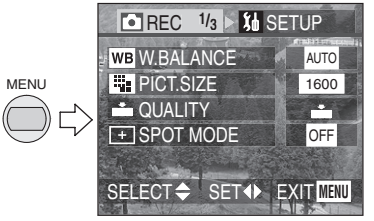
Setup Menu

1 Turn the camera on.

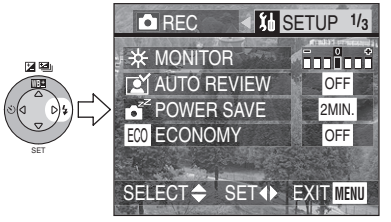


- The status indicator ① lights.

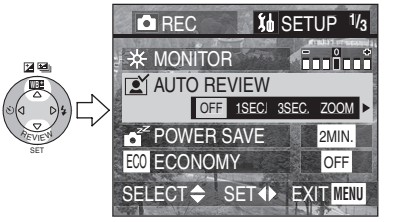
2 Press the [MENU] button.



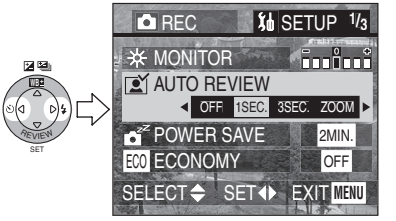
3 Select the [SETUP] Menu.



4 Select the desired item.



5 Set the desired value.



- Close the menu by pressing the [MENU] button after finishing the setting.

You can control the following items on [SETUP] Menu.

Menu	Functions
MONITOR	Adjust the brightness of the LCD monitor in 7 steps.
AUTO REVIEW*1	• [OFF]: The recorded picture does not automatically appear. • [1SEC.]: The recorded picture automatically appears on the screen for about 1 second. • [3SEC.]: The recorded picture automatically appears on the screen for about 3 seconds. • [ZOOM]: The recorded picture automatically appears on the screen for about 1 second. Then it is enlarged 4 times and appears for about 1 second. This mode is useful to confirm the focus. • In Motion image mode [ ] and Self-portrait mode [ ], auto review function is not activated. • When using burst mode or auto bracket, the auto review function works while recording the data into the card regardless of the setting on the auto review function. (The picture is not enlarged.) • When using pictures with audio, the auto review function works while recording the audio or the data into the card regardless of the setting on the auto review function. (The picture is not enlarged.)
POWER SAVE	• [2MIN.]/[5MIN.]/[10MIN.]: The camera is automatically turned off if it has not been used for a predetermined amount of time. (Press the shutter button or turn the camera off and on to cancel the power save mode.) • [OFF]: The camera is not automatically turned off. • When using the AC adaptor/connecting to a PC or printer/recording motion images/playing back motion images/during Slide Show, the power save mode is not activated. • When pressing [DISPLAY] button for 2 seconds, the power save mode is activated. (You can turn the camera on again when pressing the shutter button halfway.)

*1 Recording mode only

Menu	Functions
ECO ECONOMY*1	If you do not use the camera for about 15 seconds in recording mode, the message [MONITOR OFF] blinks and then the LCD monitor is turned off to save the power. Press any key to turn it on again. • When setting economy mode to [ON], the LCD monitor is turned off even when charging the flash. • When setting economy mode to [ON], the setting for power save mode is fixed to [2MIN.]. • You cannot use economy mode in Playback mode [▶] and Simple mode [♥]. • Economy mode is not activated while the menu screen is displayed or the self-timer is set. • Economy mode is not activated when using the AC adapter or recording motion images even if it is set to [ON].
BEEP	Set to the volume of operational sound and shutter sound. You can select the shutter sound from [1], [2] or [3]. • [ ]: The operational sound turns high. • [ ]: The operational sound turns low. • [ ]: The operational sound turns off.
000 NO.RESET*1	Set this when you want to start the file number of the picture from 0001 on the next recording. (The folder number is updated, and the file number starts from 0001.) • The folder number can be assigned from 100 to 999. When the folder number reaches to 999, it cannot be reset. We recommend formatting the card after saving the data on a PC or other. • The file number reset is also reflected on Simple mode [♥].
RESET*1	The camera is reset to the initial settings. However, the folder number, the clock setting and the setting on Simple mode [♥] are not changed.
CLOCK SET	Change the date and time. (P19)
USB USB MODE	Set to the USB communication system. Set before connecting to a PC or a printer. (P92)

*1 Recording mode only

Menu	Functions
LANGUAGE	Set to the language on the menu screen from the following 7 languages. Set to the desired language with ◄/► and determine it with ▼. • [ENGLISH]: The menu screen in English. • [DEUTSCH]: The menu screen in German. • [FRANÇAIS]: The menu screen in French. • [ESPAÑOL]: The menu screen in Spanish. • [ITALIANO]: The menu screen in Italian. • [中文]: The menu screen in Chinese (Simplified). • [日本語]: The menu screen in Japanese. • When you set to other language by mistake, select [ ] from the menu icons to set the desired language. • The language setting is also reflected on Simple mode [♥].
VOLUME*2	The volume of speakers can be adjusted in 7 steps. • When you connect the camera to a TV, the volume of the speakers of the TV is not changed.
VIDEO OUT*2	• [NTSC]: Video output is set to NTSC system. • [PAL]: Video output is set to PAL system. (P91)

*2 Playback mode only

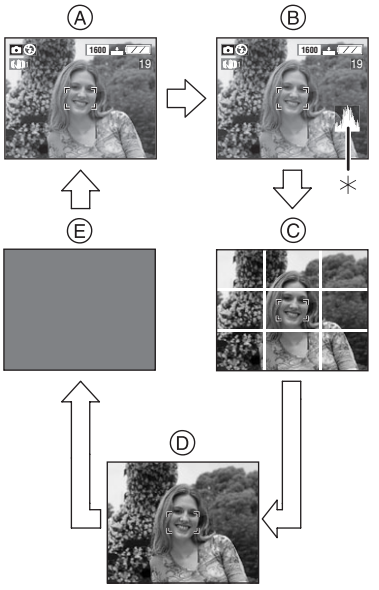
Using the LCD Monitor

■ Selecting the screen to be used

Press the [DISPLAY] button to switch to the screen to be used.

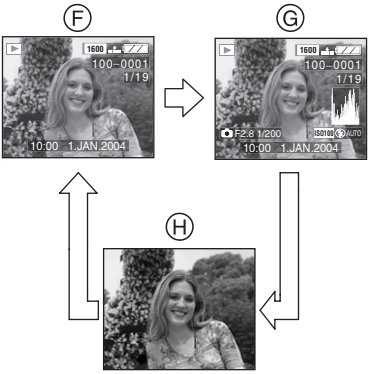
- When the menu screen appears, during multi playback or during playback zoom, the [DISPLAY] button is not activated.

In recording mode



Ⓐ Display
Ⓑ Display with histogram
Ⓒ Nondisplay (Recording guide line)
Ⓓ Nondisplay
Ⓔ LCD monitor is turned off
✳Histogram

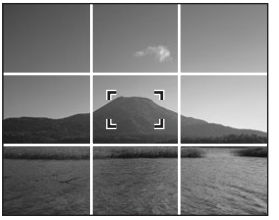
In playback mode



Ⓕ Display
Ⓖ Display with recording information and histogram
Ⓗ Nondisplay

■ Recording guide line

You can achieve balanced pictures by aligning the subject on the cross point of the horizontal and vertical guide lines. You can also take pictures easily by adjusting the horizon to the guide line.



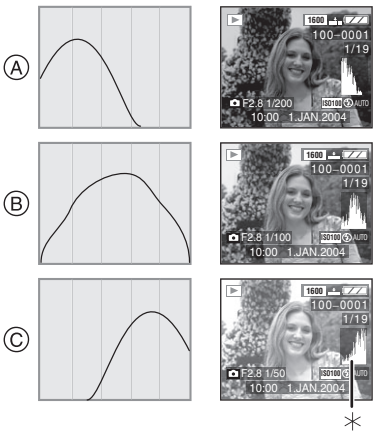
You can take pictures with well-designed composition by watching the size and the balance of subjects.

About the Histogram

- A histogram is a graph that displays brightness along the horizontal axis (black to white) and the number of pixels at each brightness level on the vertical axis.
- It allows the camera user to easily check the way a picture is being exposed.

- When the values are concentrated to the left as Ⓐ, the picture is under exposed.
- When the values in the histogram are distributed as Ⓑ, the exposure is adequate and the brightness is well-balanced.
- When the values are concentrated to the right as Ⓒ, the picture is over exposed.

■ Example of histogram



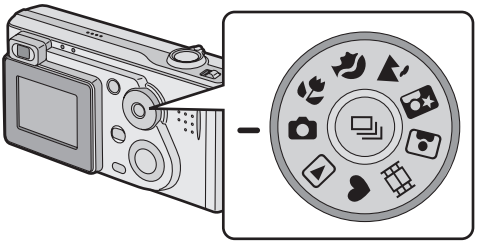
Ⓐ Under Exposed
Ⓑ Properly Exposed
Ⓒ Over Exposed
✳Histogram

◇*Suggestions/Tips*◇

- **When the photo flash is activated or when you record pictures in dark places, the histogram turns yellow because the recorded picture and the histogram do not match each other.**
- The histogram does not appear when in Motion image mode [🎞], during multi playback and playback zoom.
- The histogram in recording and playback may not match each other.
- The histogram in this camera does not match the one displayed in image editing software on PC, etc.
- The histogram in the recording mode is an approximation.

The Mode Dial

Select the desired mode turning the mode dial.



: Normal Picture mode (P28)
The aperture value and the shutter speed are automatically adjusted.

: Macro mode (P49)
This allows you to get closer to the subject up to 10 cm (Wide).

: Portrait mode (P50)
This allows you to easily achieve the depth of focus effect. The subject stands out in front of an unfocused background.

: Landscape mode (P51)
You can capture sharp and crisp landscape photos easily. Please note that this mode is suitable for landscape farther than 3 m away and in daylight.

: Night portrait mode (P52)
This allows you to record the subject clearly in front of beautiful night illumination scenery.

: Self-portrait mode (P53)
Use this mode when you want to take a picture of yourself easily.

: Motion image mode (P54)
This allows you to record motion images.

: Simple mode (P32)
You can take the pictures easily because the necessary setting menus are minimized. This mode is for beginners.

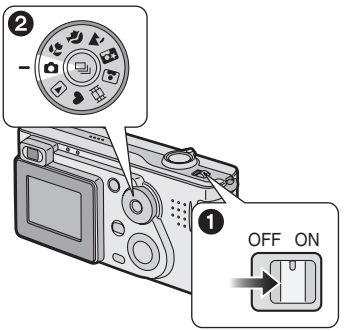
: Playback mode (P43)
This allows you to play back recorded pictures.

Taking Pictures

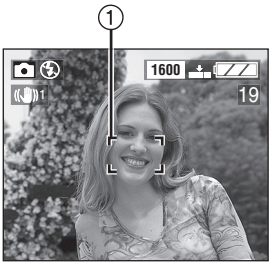
Preparation

- Insert the charged battery (P12) or connect the AC adaptor (P14).
- Insert the card. (P16)

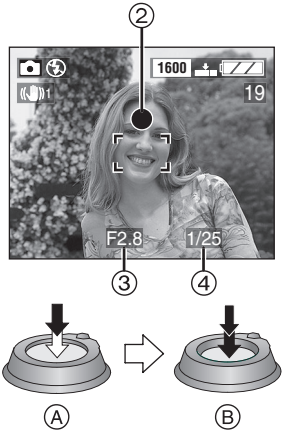
1 ❶ Turn the camera on.
❷ Select Normal Picture mode [ ].



2 Aim the AF area ① to the point you want to focus.



3 Focus on the subject to take the picture.

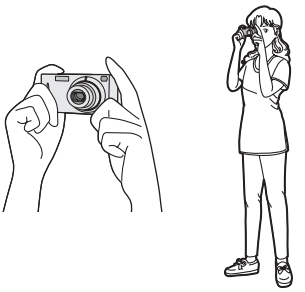


- Ⓐ: Press the shutter button halfway to focus.
- Ⓑ: Press the shutter button fully to take the picture.

- The focus indication ② lights and then the aperture value ③ and the shutter speed ④ appear.
- When the focus indication is blinking, the subject is not focused. Press the shutter button halfway and focus on the subject again.

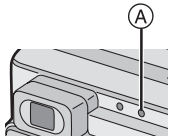
■ Posture to take good pictures

To take pictures without blurring:
- Hold the camera gently with both hands, keep arms stationary at your side and stand with your feet slightly apart.
- Check that the camera is not shaken when pressing the shutter button halfway.
- After pressing the shutter button, keep the camera stationary until the picture appears on the screen.
  In the following cases, keep the camera stationary for a long time.
  – Slow sync./Red-eye reduction [ ] (P36)
  – In Night portrait mode [ ] (P52)



- Hold the camera firmly with your right hand.
- Do not cover the flash with your finger or other objects.
- Hold the lower left of the camera with your left hand.
- Do not cover the microphone with your finger or other objects.
- Do not touch the lens barrel.

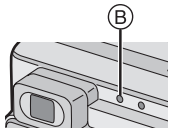
■ Status indicator Ⓐ



Lighting:
- When turning the camera on.

Blinking:
- While the focus is being adjusted or the focus is not properly adjusted.
- When the card is not inserted.
- When there is no remaining capacity on the card.
- When the card is locked in the recording mode.
- When the remaining battery power is low. (blinking slowly)

■ Flash/Access Indicator Ⓑ



Lighting:
- When accessing the card.
- When the flash fires. (It lights when the shutter is pressed halfway.)
- When sending data to PC.

Blinking:
- When charging the flash.
- When setting the flash mode to Forced OFF [ ] and pressing the shutter halfway in dark places. (blinking slowly) (The jitter alert appears)

Focusing

- You can focus on the subject up to the distance of 50 cm.
- If you press the shutter button fully without prefocusing, pictures may be blurry or unfocused.
- When the subject is focused, the camera beeps 2 times. If not, it beeps 4 times. Refer to P23 if you want to turn the operational sound off.
- In the following cases, the camera cannot focus on subjects properly in Normal Picture mode.
  - –When including both near and distant subjects in a scene.
  - –When there is dirt on the glass between the lens and the subject.
  - –When there are illuminated or glittering objects around the subject.
  - –When taking a picture in a dark place.
  - –When the subject moves fast.
  - –When the scene is poor in contrast.
  - –When jitter occurs.
  - –When recording a very bright subject.

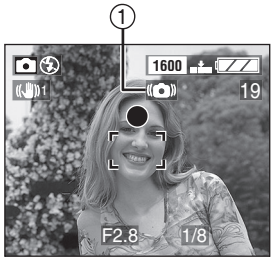
  We recommend taking pictures using prefocus (P64) or AF/AE lock (P31).
- Even if the focus indication appears and the subject is focused, it is cancelled when you release the shutter button. Press the shutter button halfway again.

Exposure

- If the exposure is not adequate, the indication of the aperture value and the shutter speed on the screen turns red. (However, the aperture value and the shutter speed do not turn red when the flash is activated.)
- The brightness of the screen may differ from that of recorded pictures. In particular, when taking pictures in dark places with slow shutter, the subject looks dark on the screen, but the actual picture is bright.
- When most of the subjects in the screen are bright (e.g. blue sky on a clear day, snowy field, etc.), the recorded pictures may become dark. In this case, compensate the exposure. (P39)

Jitter (camera shake)

- When jitter could occur, the jitter alert ① appears.



- When the jitter alert appears, we recommend using a tripod. If you cannot use a tripod, be careful of how you hold the camera. (P29)
- Be careful of jittering when pressing the shutter button.

Care for the camera

- Check to make sure there is no stain or dirt on the lens.
- Do not touch the lens directly.
- Do not cause impact to the lens or lens barrel (P6).
- When turning the camera on in the recording mode, the lens barrel comes out. Check to make sure there are no obstacles in front of the lens.
- Take care not to touch or stain the surface of the lens. When the lens becomes dirty or dust attaches to the lens, use a commercial blower brush to remove dust or dirt and wipe the lens with a dry, soft cloth. If you use solvents such as benzine, alcohol or thinner, the camera may be discoloured or broken.

- When using the camera in a sandy or dusty place, be careful not to let dirt, grit or seawater come into the camera.

■ AF/AE Lock (AF: Auto focus/ AE: Auto exposure)

When recording a picture of people with a composition as the above picture, you cannot focus on the subject because it is out of AF area in usual operation.

In this case,

1. Aim the AF area to the subject.
2. Press the shutter button halfway to fix the focus and the exposure.
   - When the subject is focused, the focus indication lights.
3. Keep pressing the shutter button halfway, move the camera as you want to compose the picture.
4. Press the shutter button fully.

- You can repeatedly retry AF/AE lock before pressing the shutter button.

◇*Suggestions/Tips*◇

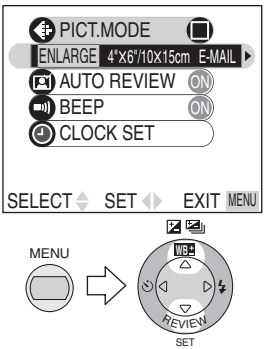
- **When brightness has changed due to the zoom or the movement of the camera, the lens may click and the picture on the screen may be drastically changed. However, the pictures are not affected.**
  The sound is caused by automatic adjustment of the aperture. It is not a malfunction.
- When pressing the shutter button, the screen may become bright or whitish for a moment. However, the recorded picture will not be influenced. This function make it easy to adjust the focus.
- We recommend setting the clock again before taking pictures. (P19)
- When the time for power save is set (P22), the camera is automatically turned off if you do not operate within the set time. When operating the camera again, press the shutter button or turn the camera off and on.
- When economy mode (P23) is set and if you do not use the camera, the LCD monitor turns off in 15 seconds. (The LCD monitor turns on when pressing any button.)

Taking Pictures in Simple Mode

We recommend you use this mode when you ask someone to take a picture.
- Offering simplified menu for ease of use.
- The picture size is easy to select.
- The icons on the display are larger.

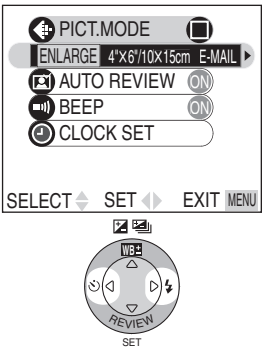
Preparation
- Set the mode dial to [♥]. (P27)

1 Select [PICT.MODE].



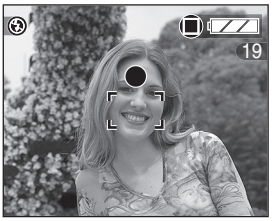
- [AUTO REVIEW]
  [ON]: The recorded picture automatically appears on the screen for about 1 second.
  [OFF]: The recorded picture does not automatically appear.
- [BEEP]
  [ON]: The operational sound turns on.
  [OFF]: The operational sound turns off.
- [CLOCK SET] (P19)

2 Select [ENLARGE], [4″×6″/10×15cm] or [E-MAIL].



- [ENLARGE]:
  This selection is intended for situations when large printing is desired. The camera is preset to [2304×1728] (DMC-FX5)/ [2048×1536] (DMC-FX1) in [Fine] picture mode.
- [4″×6″/10×15cm]:
  This selection will offer an easy way to produce small “general purpose” prints.
- [E-MAIL]:
  This selection favors smaller file size, optimized for home page and e-mail use.
- Close the menu by pressing the [MENU] button after finishing the setting.

3 Take the picture.



■ Picture size and quality in [PICT.MODE]

ENLARGE	2304×1728 pixels (DMC-FX5)/ 2048×1536 pixels (DMC-FX1)	Fine
4″×6″/ 10×15cm	1280×960 pixels	Fine
E-MAIL	640×480 pixels	Standard

■ Other settings in Simple mode

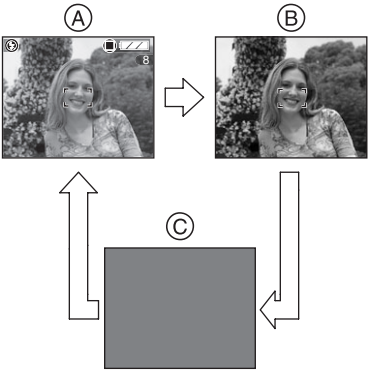
MONITOR (P22):
- Fixed to [0] (standard).

POWER SAVE (P22):
- Fixed to [2MIN.].
- When you want to turn the camera on again, press shutter button or turn the camera off and then on.
- When you use the AC adapter, the power save mode is not activated.

ECONOMY (P23):
- Fixed to [OFF].

■ Selecting the screen to be used

Press the [DISPLAY] button to switch to the screen to be used.



Ⓐ Display
Ⓑ Nondisplay
Ⓒ LCD monitor is turned off

◇***Suggestions/Tips***◇

- The burst mode is available only with the low speed. (P42)

	Number of recordable pictures
ENLARGE	max. 5 frames
4″×6″/10×15cm	max. 5 frames
E-MAIL	max. 7 frames (DMC-FX5)/ max. 8 frames (DMC-FX1)

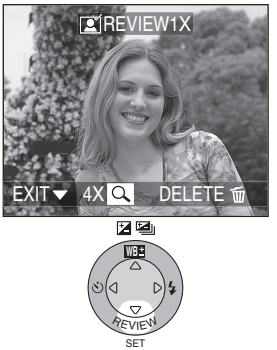
- The recordable range is 30 cm – ∞ (Tele), 10 cm – ∞ (Wide).
- If the distance between the camera and the object is beyond the recordable range, the focus may not be adjusted properly even the focus indication is lit.
- The settings (except for the clock setting) of the Simple mode [♥] will not be applied to the other recording modes.
- Only the quality (data compression ratio) cannot be changed on the [PICT.MODE] menu.

Checking the Recorded Picture (Review)

Preparation

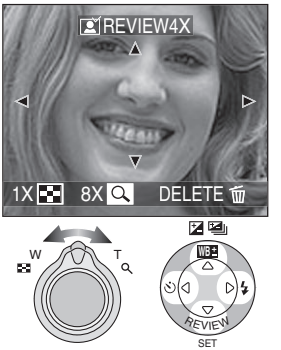
- In Motion image mode [🎞], review function is not activated.

1 Press ▼.



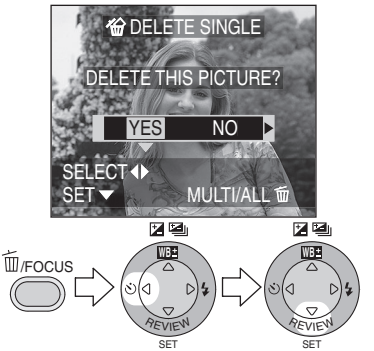
- The last recorded picture appear for about 10 seconds.
- Press the shutter button halfway or ▼ to cancel the review.
- You can check the previous or following picture with ◄/►.
- When the recorded pictures are too bright or dim, compensate the exposure. (P39)

2 Enlarge and shift the picture.



- 🔍 : 1× →4× →8×
- ⊡ : 8× →4× →1×

■ Deleting the recorded picture during the review



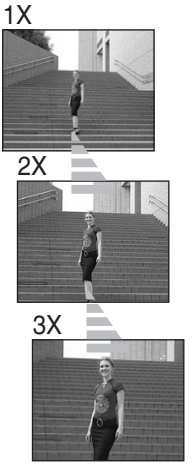
- Once deleted, pictures cannot be recovered.
- Multi pictures or all pictures can be deleted. Read P47 or P48 to operate them.

Using the Optical Zoom

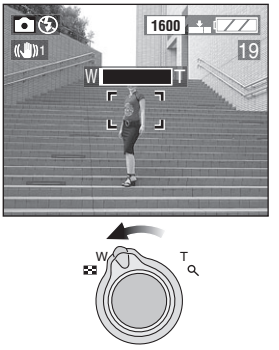
You can make people and subjects appear closer with the 3 times optical zoom, and landscapes can be recorded in wide angle.

Preparation

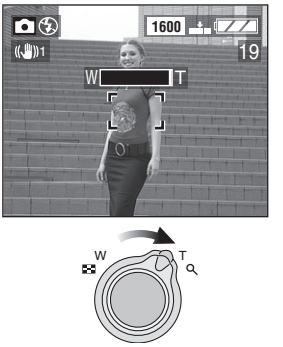
- Set the mode dial except for [▶]. (P27)



■ To make subjects appear further away (Wide)



■ To make subjects appear closer (Tele)



◇*Suggestions/Tips*◇

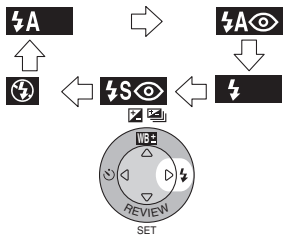
- The picture may be slightly distorted according to the lens. The distortion will increase as you make subjects wider and closer.
- When using the zoom lens at high magnification, the quality of the picture can be enhanced if a tripod is used. At high magnification, even small movements can cause a slight decrease in picture sharpness.

Taking Pictures using the Built-in Flash

Preparation

• Set the mode dial except for [▶]/[🎞]/[🏔]. (P27)

■ Switching the flash setting



ϟA : AUTO
The flash is automatically activated according to the recording condition.

ϟA👁 : AUTO/Red-eye reduction
The flash is automatically activated according to the recording condition.
It reduces the red-eye phenomenon (eyes of the subject appear red in photo flash) by lighting the flash before the actual recording of the picture.
Use this when you take pictures of people in low lighting conditions.

ϟ : Forced ON
The flash is activated every time a picture is recorded forcibly.
Use this when your subject is back-lit or under fluorescent light.

ϟS👁 : Slow sync./Red-eye reduction
When you take a picture with a dark background landscape, it makes the shutter speed slow when the flash is activated, so that the dark background landscape will become bright. Simultaneously it reduces the red-eye phenomenon.
Use this when taking pictures of people with the dark background.

⊘ : Forced OFF
Even in dark places, the flash is not activated.
Use this when taking pictures in places where use of the flash is not allowed.

■ Available flash settings

	ϟA	ϟA👁	ϟ	ϟS👁	⊘
📷	○	○	○	○	○
♥	—	○	○	—	○
🌷	○	○	○	○	○
🏃	○	○	○	—	○
🏔	—	—	—	—	○
🌃	—	—	—	○	○
👤	○	○	○	—	○
🎞	—	—	—	—	○

■ The available flash range to take pictures

ISO sensitivity	Available flash range	
ISO50	Wide	40 cm – 1.6 m
	Tele	40 cm – 1 m
ISO100	Wide	40 cm – 2.4 m
	Tele	40 cm – 1.4 m
ISO200/AUTO	Wide	40 cm – 3.3 m
	Tele	40 cm – 2 m
ISO400 (DMC-FX1 only)	Wide	40 cm – 4.8 m
	Tele	40 cm – 2.8 m

• The available flash range is an approximation.

■ Shutter speed for each flash mode

Flash mode	Shutter speed	
Flash ON	1/60th – 1/2000th (Except for Slow sync./Red-eye reduction [ ])	
Flash OFF	Stabilizer function [MODE1] [MODE2]	1/8th – 1/2000th (Night portrait mode: 8 – 1/2000th)
	Stabilizer function [OFF]	1 – 1/2000th (Night portrait mode: 8 – 1/2000th)

◇*Suggestions/Tips*◇

- In Landscape mode [ ]/Motion image mode [ ], flash setting is fixed to the Forced OFF [ ].
- When using the flash in ISO AUTO setting, the ISO sensitivity is automatically adjusted from ISO100 to 200. To avoid noises, decrease the ISO sensitivity.
- **Do not stare at the photo flash from close proximity (a few centimeters from the camera) when using the flash.**
- **If you bring the flash too close to the subjects, they may be distorted or discoloured by its heat and lighting.**
- **Do not cover the photo flash with your fingers or any other items.**
- If the subject is too close when using the flash, the picture may be over exposed.
- When the jitter alert appears, we recommend using the flash.
- When you set to burst mode or auto bracket, only 1 picture is recorded for every flash activated.

- The flash icon turns red when activating the flash and pressing the shutter button halfway.
- When the flash is being charged, the flash/access indicator and the flash icon blink red, and you cannot take a picture even when you press the shutter button fully.
- When taking a picture with the flash, the white balance will be automatically adjusted [except for [☼] (Daylight)], but the white balance may not be properly adjusted when the photo flash is insufficient.
- To avoid noises, we recommend setting [PICT.ADJ.] to [NATURAL]. (P68)
- Refer to P62 for the ISO sensitivity.

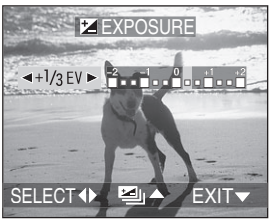
Compensating the Exposure

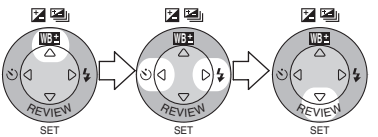
Use this function when you cannot achieve appropriate exposure due to the difference of brightness between the subject and the background.

Preparation

- Set the mode dial except for [▶]/[♥]/[🎞]. (P27)

1 Select [EXPOSURE] and compensate the exposure.





- You can compensate from −2 EV to +2 EV in steps of 1/3 EV.

◇***Suggestions/Tips*** ◇

- EV is an abbreviation of Exposure Value, and it is the amount of light given to the CCD by the aperture value and the shutter speed.
- The compensation range of the exposure will be limited depending on the brightness of the subject.
- The exposure compensation value appears on the lower left of the screen.
- The exposure value is memorised even if the camera is turned off.

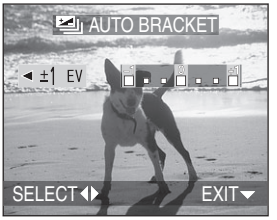
Taking Pictures using Auto Bracket

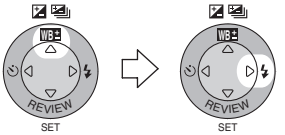
In this mode, 3 pictures are automatically recorded by each press of the shutter button according to the compensation range of the exposure.
You can select the desired exposure among the 3 types of pictures.

Preparation

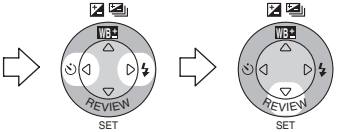
- Set the mode dial except for [▶]/[♥]/[🎞]. (P27)

1 Select [AUTO BRACKET] and set the compensation range of the exposure.





2 times



- You can select the exposure from 0 (OFF), ±1/3 EV, ±2/3 EV and ±1 EV.
- When you do not use auto bracket, select [OFF].

◇***Suggestions/Tips*** ◇

- When setting the auto bracket, the auto bracket icon appears on the lower left of the screen.
- Once you take a picture, auto bracket will be cancelled automatically.
- When taking pictures using auto bracket after the exposure compensation, the pictures are based on the compensated exposure.
  When the exposure is compensated, the compensated exposure value appears on the lower left of the screen.
- When the flash is activated, you can take only 1 picture. Auto bracket setting cannot be cancelled.
- When setting auto bracket, you cannot take a picture with audio.
- When setting auto bracket and the burst mode simultaneously, auto bracket will be performed.
- The exposure may not be compensated with auto bracket depending on the brightness of the subject.

Taking Pictures with the Self-timer

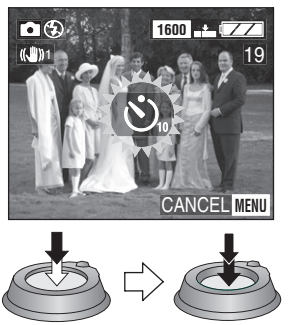
Preparation

- Set the mode dial except for [▶]/[🎞]. (P27)

1 Switch the self-timer setting.

: Self-timer set to 10 seconds
↓
: Self-timer set to 2 seconds
↓
No display (cancelled)

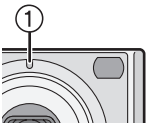
2 Focus on the subject to take the picture.



- If you press the [MENU] button when the self-timer is set, the self-timer setting is cancelled.

◇***Suggestions/Tips*** ◇

- When using a tripod or other cases, setting the self-timer to 2 seconds is convenient to stabilize the jitter caused by pressing the shutter button.
- The self-timer indicator ① blinks and the shutter is activated after 10 seconds (or 2 seconds).



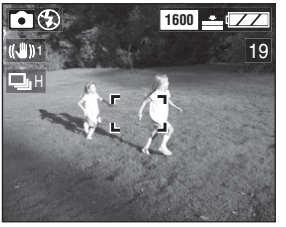
- When pressing the button fully at a stroke, the subject is automatically focused just before recording pictures.
- In Simple mode [❤], the self-timer can only be set to 10 seconds.
- In Self-portrait mode [🤳], the self-timer can only be set to 2 seconds.
- When setting the self-timer in the burst mode, you can take only 1 picture.
- We recommend using a tripod when setting the self-timer.

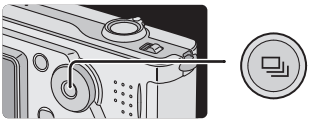
Taking Pictures using Burst Mode

Preparation

- Set the mode dial except for [▶]/[🎞]. (P27)

1 Switch the burst mode setting.





H : High speed

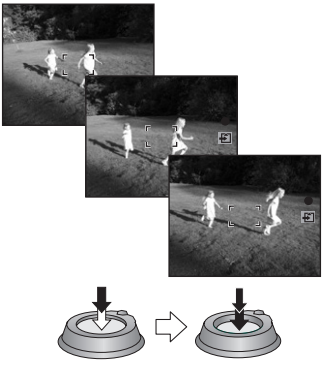
↓

L : Low speed

↓

No display (cancelled)

2 Take pictures.



- Keep pressing the shutter button fully to activate the burst mode.

◇*Suggestions/Tips*◇

■ Number of pictures recorded in burst mode

	Burst speed	Number of recordable pictures	
H	4 frames/ second	max. 5 frames	max. 7 frames (DMC-FX5)/ 8 frames (DMC-FX1)
L	2 frames/ second	max. 5 frames	max. 7 frames (DMC-FX5)/ 8 frames (DMC-FX1)

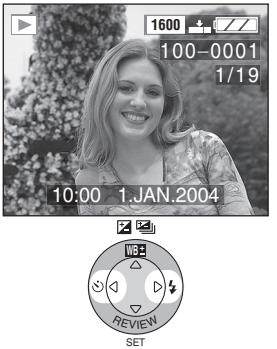
- It is possible to record 4 frames in 1 second in burst mode at a shutter speed higher than 1/60th.
- If the flash is activated, you can record only 1 frame.
- In Simple mode [♥], the burst speed is fixed to Low. (P32)
- You cannot take pictures with audio in the burst mode.
- When setting auto bracket and the burst mode simultaneously, auto bracket will be performed.
- Burst mode will not perform as described if a MultiMediaCard is used in place of an SD Memory Card. The reading/writing speed of a MultiMediaCard is slower than that of an SD Memory Card.

Playing Back Pictures

Preparation

- Set the mode dial to [▶]. (P27)

1 Select the picture.



- Press ◄ to play back the previous picture.
- Press ► to play back the next picture.
- The picture following the last one is the first picture.

■ Fast forwarding/Fast rewinding

When you keep pressing ◄/► during playback, the file number and the page number are updated. If you release ◄/► when the number of the desired picture appears, you can play back the picture.

►: Fast forward
◄: Fast rewind

- The number of files forwarded/rewound at a time depends on how long you hold down ◄/►.
- The longer you hold down ◄/►, the more pictures you can forward/rewind at a time.
- The setting of the number of files forwarded/rewound at a time varies depending on the total number of the recorded pictures.
- When releasing ◄/►, the number of file forwarded begins from 1.
- While forwarding or rewinding a large number of pictures by holding down ◄/►, once release ◄/► before reaching the picture to be played back, then press ◄/► to forward/rewind pictures until the desired picture appears.
- In review playback in the recording mode or multi playback, the picture can only be forwarded or rewound one by one.

◇*Suggestions/Tips*◇

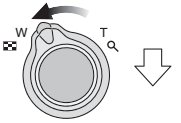
- This camera is based on the DCF standards (Design rule for Camera File system) which were established by the Japan Electronics and Information Technology Industries Association (JEITA).
- When changing the folder name or file name on PC, the pictures may not be played back.
- The file format that can be played back with this camera is JPEG. (There are also pictures that cannot be played back in JPEG format.)
- When playing back pictures that have been recorded with other equipment, the picture quality may be deteriorated and pictures may not be played back.
- When playing back a file out of standard, the folder/file number is indicated by [—] and the screen may turn black.
- The interference fringe may appear on the screen depending on the subject. This is called moire. This is not a malfunction.

9 Pictures Multi Playback

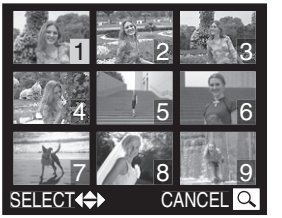
Preparation

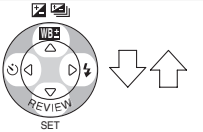
• Set the mode dial to [▶]. (P27)

1 Switch to multi screen.



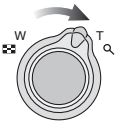
2 Select the pictures.





■ To return to the normal playback

Rotate the zoom lever towards [🔍].



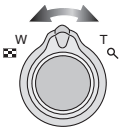
• The picture with the number coloured in yellow appears.

Using the Playback Zoom

Preparation

- Set the mode dial to [▶]. (P27)

1 Enlarge the picture.



- Q : 1×→2×→4×→8×→16×
- ▪ : 16×→8×→4×→2×→1×

2 Shift the picture.

■ To delete a picture during the playback zoom

Press the [🗑] button.
When the confirmation screen appears, press ◄ to select [YES], and press ▼. (P46)

◇*Suggestions/Tips*◇

- The more the picture is enlarged, the more its quality deteriorates.
- The playback zoom may not operate if pictures have been recorded with other equipment.

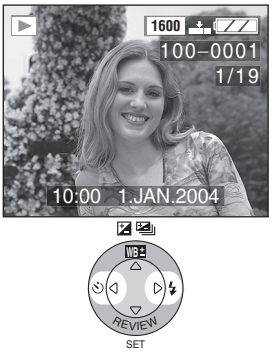
Deleting Pictures

Preparation

- Set the mode dial to [▶]. (P27)

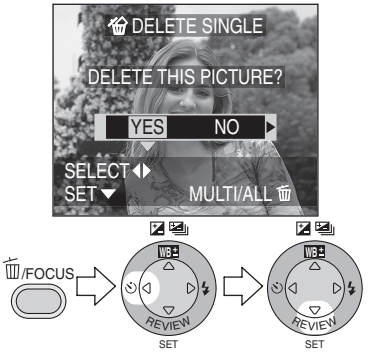
■ To delete single picture

1 Select the picture to be deleted.



- Press ◄ to play back the previous picture.
- Press ► to play back the next picture.

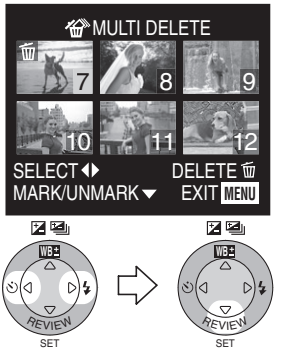
2 Delete the picture.



To delete multi pictures

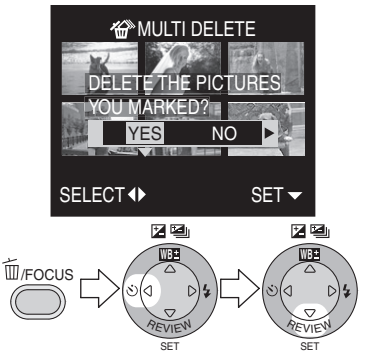
1 Select [MULTI DELETE].

2 Select the pictures to be deleted.



- The selected pictures appear with [🗑]. When ▼ is pressed again, the setting is cancelled.
- The icon [ ] blinks red if the selected picture cannot be deleted. Cancel the protect setting. (P81)

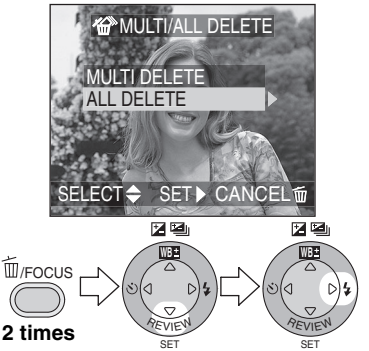
3 Delete the pictures.



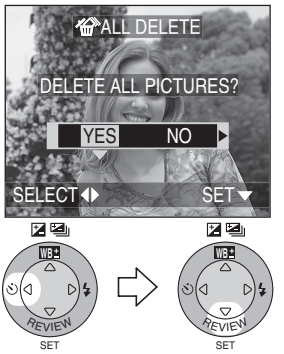
- It is possible to delete up to 50 pictures all at once.

■ To delete all pictures

1 Select [ALL DELETE].



2 Delete all of the pictures.



◇*Suggestions/Tips*◇

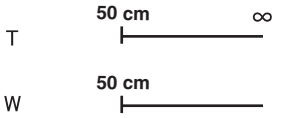
- Once deleted, pictures cannot be recovered. Please double-check before deleting pictures.
- Pictures that are protected (P81) or not of DCF standards (P43) are not deleted.
- Do not turn off the camera or remove the card while deleting.
- When the remaining battery power (P11) is low, use the AC adaptor.

Taking Pictures using Macro Mode

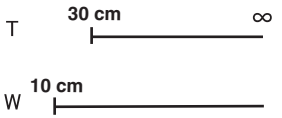
This mode allows you to take pictures closely focusing on the subject. (E.g. When taking pictures of flowers.)
You can take pictures with the lens at a distance of 10 cm (Wide) from the subject.

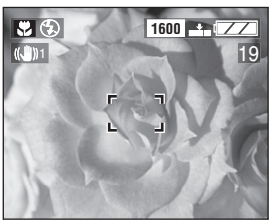
Preparation
• Set the mode dial to [ ]. (P27)

• Normal



• Macro mode [ ]





◇***Suggestions/Tips*** ◇

- In Macro mode, we recommend using a tripod.
- When the camera lens is at a distance over the available range from the subject, the subject may not be focused even if the focus indication lights.
- In Macro mode, the captured range may differ from the visible range by the optical finder. Use the LCD monitor to take pictures.
- The available flash range is about 40 cm – 3.3 m (Wide), 40 cm – 2 m (Tele). (When setting to ISO200/ AUTO)

Taking Pictures using Portrait Mode

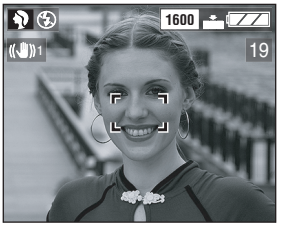
This mode allows you to make the subject stand out from the unfocused background and adjust the exposure and the hue.

Preparation

• Set the mode dial to [ ]. (P27)

■ Technique for Portrait mode

To make this mode more effective, rotate the zoom lever to Tele as far as possible to be close to the subject, and then select the background which is far from the camera.



◇*Suggestions/Tips*◇

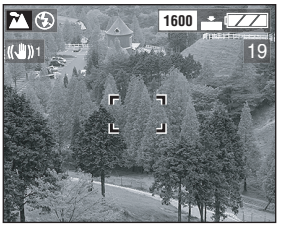
• This mode is suitable for outdoors in the daytime.
• [AUTO] setting in white balance works best when recording outdoors in the daytime. When using indoors, the hue may change.
• You can change the white balance setting. (P56)
• When you want to change the exposure or the hue, compensate the exposure or adjust the picture quality.

Taking Pictures using Landscape Mode

In Landscape mode the camera is adjusted to produce the greatest depth of field. This mode works best outdoors under direct sunlight at distances exceeding 3 m.

Preparation

• Set the mode dial to [ ]. (P27)



◇***Suggestions/Tips*** ◇

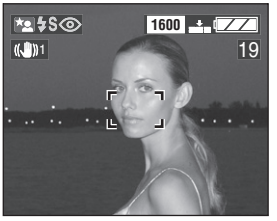
- Flash is set to Forced OFF [ ].
- The focus is adjusted at a distance of 3 m – ∞.
- [AUTO] setting in white balance works best when recording outdoors in the daytime. When using indoors, the hue may change.
- You can change the white balance setting. (P56)

Taking Pictures using Night Portrait Mode

Night Portrait Mode allows you to take pictures against a nighttime landscape. By using the flash and a slow shutter speed, the picture will show the subject and the background brighter than they appear in real life.

Preparation

• Set the mode dial to [ ]. (P27)



■ Shutter speed in Night portrait mode

Flash mode	Shutter speed	
	Stabilizer function [MODE1] [MODE2]	1/8th – 1/2000th
	Stabilizer function [OFF]	1 – 1/2000th
	8 – 1/2000th	

■ Technique for Night portrait mode

• When you record pictures holding the camera with your hands, keep the camera firmly with activating the stabilizer function. (Shutter speed: max. 1/8th) When you turn the stabilizer function to [OFF], we recommend using a tripod since the shutter speed becomes slow (max. about 1 second).
• Keep the subject still for about 1 second after taking a picture.
• The subject should be positioned within the available flash range [40 cm – 3.3 m (Wide), 40 cm – 2 m (Tele)]. (When setting to ISO200/ AUTO)
• We recommend rotating the zoom lever to Wide.
• The focus range is 1 m – 3 m.

■ When taking picture of only a landscape at night

• When flash is set to Forced OFF [ ], you can capture the night illumination scenery itself with slower shutter speed. (Max: about 8 seconds)
• The focus range is 3 m – ∞.

◇*Suggestions/Tips*◇

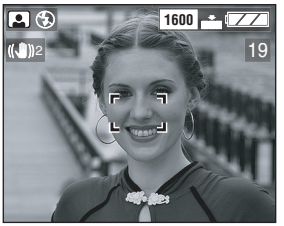
• Flash setting is fixed to Slow sync./ Red-eye reduction [ ].
• The shutter may be kept closed (max. about 8 seconds) after taking a picture with slow shutter speed, but it is not a malfunction.
• You can change the white balance setting. (P56)
• When you take pictures in dark places, noises may become visible.
To avoid noises, we recommend setting [PICT.ADJ.] to [NATURAL]. (P68)
• When you record pictures in dark places, it may be difficult to focus on the subject. We recommend recording pictures in bright places with contrast using the AF/AE lock (P31) as far as possible.

Taking Pictures using Self-portrait Mode

This mode allows you to take a picture of yourself.

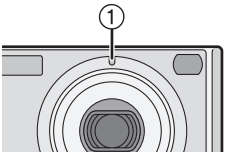
Preparation

- Set the mode dial to [ ]. (P27)



■ Technique for Self-portrait mode

- When you are focused by pressing the shutter button halfway, the self-timer indicator ① lights up. Fix the camera firmly and then press the shutter button fully.



- The captured picture automatically appears on the LCD monitor for reviewing. Refer to P34 for operations on the review function.
- When the picture may be blurred by slow shutter speed, we recommend using the 2 seconds self-timer. (P41)

◇*Suggestions/Tips*◇

- The available focus range is 30 cm – 70 cm. When the camera lens is at a distance over the range, the subject may not be focused even if the focus indication appears.
- When you take a picture of yourself with audio, the self-timer indicator lights up while recording the audio.
- When adjusting the Mode dial to [ ], the zoom lever is automatically moved to Wide.
- The self-timer can be set to [OFF] or [2SEC.]. (P41) When you set to [2SEC.], it is kept until the camera is turned [OFF] or you switch the mode.
- The stabilizer function is fixed to [MODE2]. (P69)
- You cannot set the Spot mode.

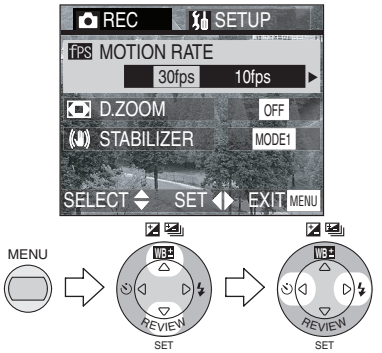
Recording Motion Images

You can record motion images with audio.

Preparation

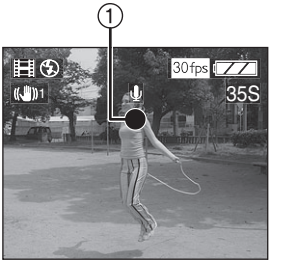
- Set the mode dial to [🎞]. (P27)

1 Select [MOTION RATE].



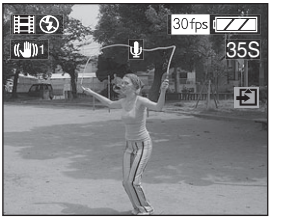
- [30fps]:
  The motion of recorded image is smooth, but the file size is large.
- [10fps]:
  The file size is smaller so you can record motion images for a longer time.
- fps (frame per second); This means the number of frames used in 1 second.
- Close the menu by pressing the [MENU] button after finishing the setting.

2 Press the shutter button halfway.



- When the subject is focused, the focus indication ① lights.

3 Press the shutter button fully to start the recording.



- The audio recording starts simultaneously from the built-in microphone ② of the camera.

- By pressing the shutter button fully again, the recording stops.
- If the memory of the card becomes full during recording, the recording stops automatically.

■ Available recording time

SD Memory Card Capacity	Motion rate	
	10fps	30fps
16 MB	75 seconds	25 seconds
32 MB	160 seconds	55 seconds
64 MB	350 seconds	120 seconds
128 MB	720 seconds	240 seconds
256 MB	1450 seconds	480 seconds
512 MB	2950 seconds	1020 seconds

- The remaining recording time appears on the screen. (It is an approximation.)
- The recordable time is an approximation.

◇*Suggestions/Tips*◇

- The picture size is fixed to 320×240 pixels.
- The motion images cannot be recorded without audio.
- If using the MultiMediaCard, after recording motion images, the flash/access indicator and the card access indication may appear for a while, but this is not a malfunction.
- After recording starts, the auto focus/zoom/aperture values are fixed (with the first frame).
- Recording could suddenly stop depending on the type of the card when recording motion images.
- When the motion images recorded with this camera is played back on other equipment, the quality of pictures and sounds may be deteriorated or they may not be played back.
- The motion images recorded with setting [MOTION RATE] to [30fps] cannot be played on the camera which does not support [30fps] of motion rate.
- The review function cannot be used.
- The stabilizer function can be set to only [MODE1].

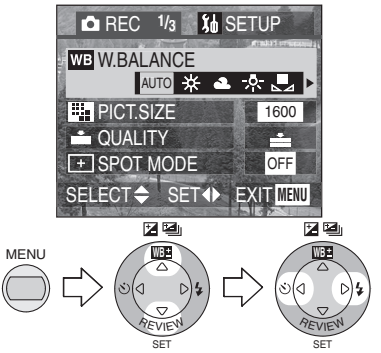
Setting the White Balance

In certain situations, the colour white may appear slightly reddish or bluish. This can occur when shooting under early or late day sunlight, on a cloudy day, or under halogen lighting. By using the manual White Balance feature you can achieve a more accurate reproduction of the colour white.

Preparation

- Set the mode dial except for [▶]/[♥]/[🎞]. (P27)

1 Select [W.BALANCE] and set the desirable mode.



- [AUTO]:
  for setting the white balance automatically (auto white balance)
- [☼] (Daylight):
  for recording outdoors on a bright day
- [☁] (Cloudy):
  for recording under a cloudy and shady sky
- [💡] (Halogen):
  for recording under halogen lighting
- [▪] (White set):
  for manual setting (Read the following page where the manual setting is explained in detail.)
- Close the menu by pressing the [MENU] button after finishing the setting.

◇***Suggestions/Tips*** ◇

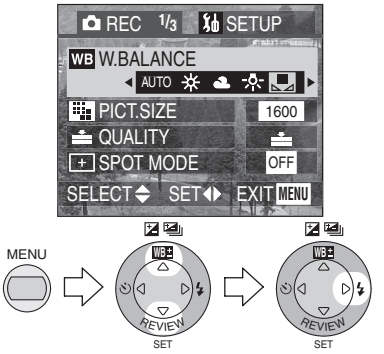
- When setting the white balance to the mode except for [AUTO], you can finely adjust the white balance. (P58)
- The setting of the white balance is applied to the other recording modes.
- In Simple mode [♥]/Motion image mode [🎞], the white balance is fixed to [AUTO].
- When taking a picture with the flash, the white balance will be automatically adjusted [except for [☼] (Daylight)], but the white balance may not be properly adjusted when the photo flash is insufficient.

Setting the White Balance manually (White set)

Preparation

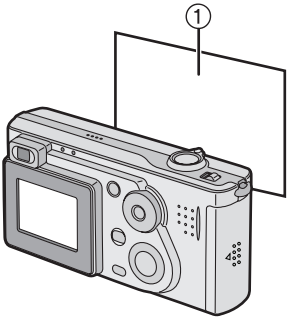
- Set the mode dial except for [▶]/[♥]/[🎞]. (P27)

1 Select [W.BALANCE] and set to [🖳].



2 (Only when setting the white balance again) Press ►.

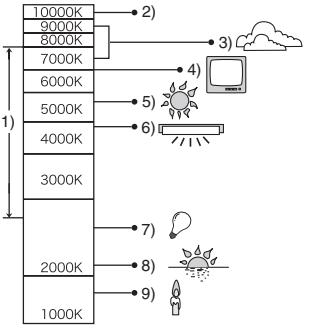
3 Aim the camera at a sheet of white paper ① or similar object so that it completely fills the frame to white on the screen and press the shutter button fully.



- Close the menu by pressing the [MENU] button after finishing the setting.

Use of auto white balance adjustment in inappropriate lighting conditions may result in reddish or bluish pictures. Where the subject is surrounded by many light sources, auto white balance adjustment may not operate properly. In this case, set the white balance to the mode except [AUTO] manually.

1 The range that is controlled by the auto white balance adjustment mode of this camera
2 Blue sky
3 Cloudy sky (Rain)
4 TV screen
5 Sunlight
6 White fluorescent light
7 Incandescent light bulb
8 Sunrise and sunset
9 Candlelight



K=Kelvin Colour Temperature

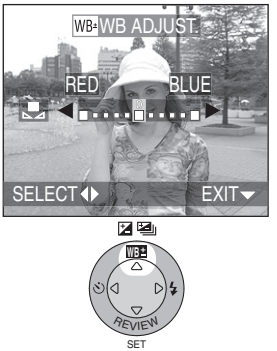
Finely Adjusting the White Balance

If you cannot acquire the desirable hue with white balance because of too many different light sources, etc., adjust the fine white balance as follows.

Preparation

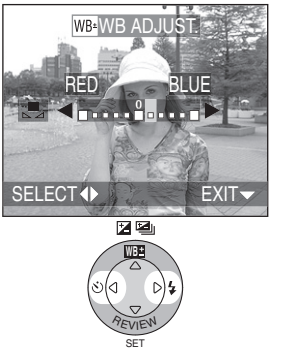
- Set the mode dial except for [▶]/[♥]/[🎞]. (P27)
- Set the white balance to [☼]/[☁]/[💡]/[▪]. (P56)

1 Press ▲ until [WB WB ADJUST.] appears.



3 times

2 Adjust the white balance.



- ▶ [BLUE]: Press when the hue is reddish.
- ◀ [RED]: Press when the hue is bluish.
- Close the function by pressing ▼ after finishing the adjustment.

◇***Suggestions/Tips*** ◇

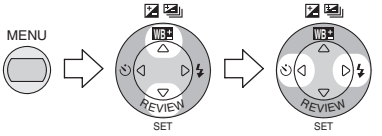
- The white balance icon turns red or blue.
- You can set the value independently for each of the modes in white balance.
- When you set the white balance using the White set [▪], the adjustment level is set to “0”.
- The adjusted picture will be close, though may not be identical to the actual picture.

Changing the Picture Size

Preparation

- Set the mode dial except for [▶]/[♥]/[🎞]. (P27)

1 Select [PICT.SIZE] and set the picture size.



- [2304]: 2304×1728 pixels (DMC-FX5)
- [2048]: 2048×1536 pixels (DMC-FX1)
- [1600]: 1600×1200 pixels
- [1280]: 1280×960 pixels
- [640]: 640×480 pixels
- [HDTV]: 1920×1080 pixels
- Close the menu by pressing the [MENU] button after finishing the setting.

(The screen is displayed as illustrated in DMC-FX5.)

◇***Suggestions/Tips*** ◇

- In Motion image mode [🎞], the picture size is fixed to 320×240 pixels.
- The smaller the picture size (640×480 pixels) you select, the more pictures you can store on the card. In addition, a small file size allows you to attach the picture to an e-mail or post it on a web site more easily.
- If you select a larger picture size (2304×1728 pixels: DMC-FX5, 2048×1536 pixels: DMC-FX1), the printed picture will be clearer, especially with larger sized prints.
- If you playback pictures recorded using [HDTV] mode on a High-Definition TV, (HDTV has 16:9 aspect) the picture quality will be higher. An SD Memory Card can be played on TVs with an SD Memory Card slot.

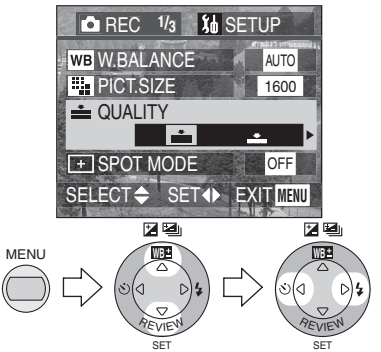
Changing the Quality

"Quality" refers to the amount each image is compressed. Lower compression results in superior picture quality. Higher compression allows you to store more images on your SD Memory card.

Preparation

- Set the mode dial except for [▶]/[♥]/[🎞]. (P27)

1 Select [QUALITY] and set the quality.



- : Fine (Low compression)
  It gives priority to picture quality to record high quality pictures.
- : Standard (High compression)
  It gives priority to the number of recordable pictures and records standard quality pictures.
- Close the menu by pressing the [MENU] button after finishing the setting.

◇***Suggestions/Tips*** ◇

- It may happen that pictures appear like a mosaic depending on the subject or the recording condition.
- The number of recordable pictures depends on the subject.
- The number of remaining frames may not correspond with recorded frames.
- Refer to P111 for the number of recordable pictures.

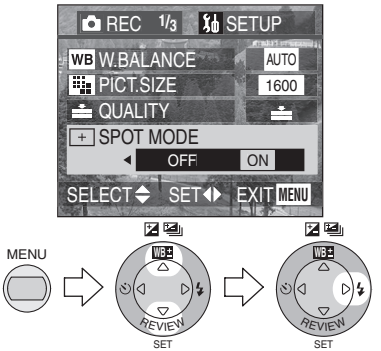
Taking Pictures using Spot Mode

When using Spot mode the size of the area used to calculate the focus and exposure is decreased. It is useful when you may be shooting through a group of people and want to designate where in the group the camera will calculate the exposure.

Preparation

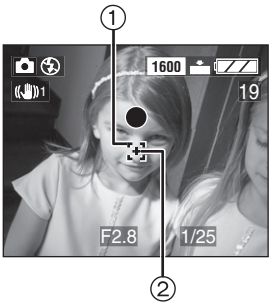
- Set the mode dial except for [▶]/[♥]/[🎞]/[👤]. (P27)

1 Select [SPOT MODE] and set it to [ON].



- Close the menu by pressing the [MENU] button after finishing the setting.

2 Aim the spot AF area to the subject and press the shutter button halfway for the AF/AE lock.



- The spot AF area [ ] ① and spot metering target + ② appear.

3 Move the camera to compose the picture fixing the focus on the subject and take the picture.

- You can set suitable AF/AE in more limited areas.

◇***Suggestions/Tips*** ◇

- When the subject is dark, it may not be focused properly.
- Background may become dark or whitish depending on the subject because the exposure is set appropriately in the spot AF area.

Setting ISO Sensitivity

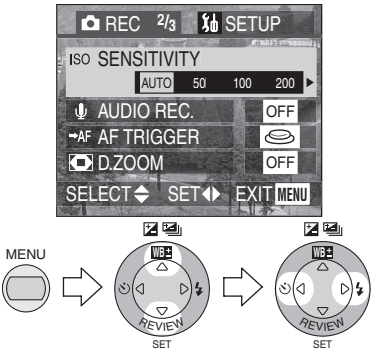
The ISO setting sets the cameras sensitivity to light. The ISO setting can be increased when you need to take pictures in places where a flash may not be allowed. The overall picture quality will decrease slightly as the ISO setting is increased.

ISO sensitivity	**50** ⇔ **200 (DMC-FX5)** **50** ⇔ **400 (DMC-FX1)**	
Use in bright places (E.g. outdoors)	Suitable	Not suitable
Use in dark places	Not suitable	Suitable
Shutter speed	Slow	Fast
Noises	Less	Increase

Preparation

• Set the mode dial except for [▶]/[♥]/[🎞]. (P27)

1 Select [SENSITIVITY] and set the ISO sensitivity.



• When setting to [AUTO], the ISO sensitivity is automatically adjusted from ISO50 to ISO200 according to the brightness. (From ISO100 to ISO200 when using the flash)

• Close the menu by pressing the [MENU] button after finishing the setting.

(The screen is displayed as illustrated in DMC-FX5.)

◇***Suggestions/Tips***◇

• In Simple mode [♥]/Motion image mode [🎞], ISO sensitivity is fixed to [AUTO].

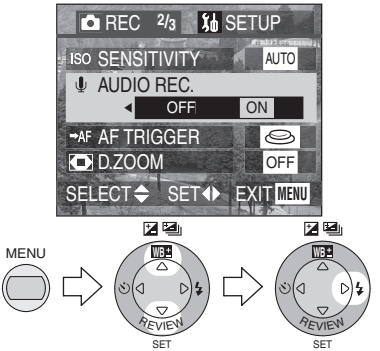
• To avoid noises, we recommend decreasing the ISO sensitivity or setting [PICT.ADJ.] to [NATURAL]. (P68)

Taking Pictures with Audio

Preparation

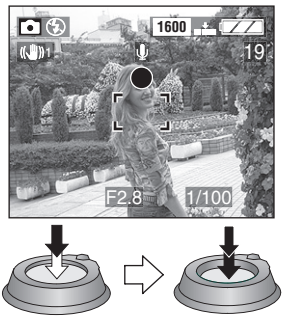
- Set the mode dial except for [▶]/[♥]/[🎞]. (P27)

1 Select [AUDIO REC.] and set it to [ON].



- Close the menu by pressing the [MENU] button after finishing the setting.

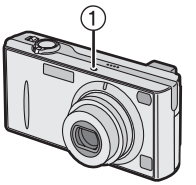
2 Take the picture.



- 5 seconds after, the audio recording is stopped automatically.
- If you press the [MENU] button during the audio recording, it will be cancelled. The audio cannot be recorded.

◇ ***Suggestions/Tips*** ◇

- It is not necessary to keep pressing the shutter button.
- Audio is recorded from the built-in microphone ① of the camera.



- When setting to auto bracket/burst mode, it is not possible to take pictures with audio.
- When audio is recorded with each picture the total number of pictures that can be stored on each card will be slightly decreased.

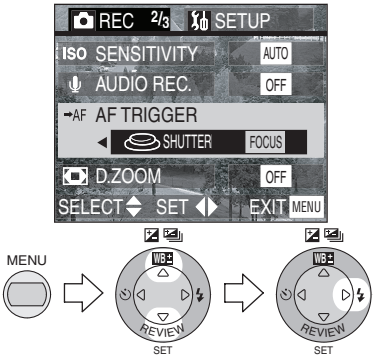
Using the AF Trigger

Prefocus is a technique to focus on the point where the subject comes in advance, and it is used when taking a picture of the subject with quick motion.
This function is suitable when the distance between the camera and the subject is certain.

Preparation

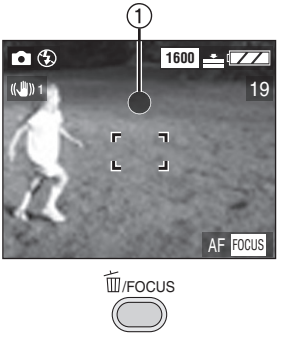
- Set the mode dial except for [▶]/[♥]/[🎞]/[👤]. (P27)

1 Select [AF TRIGGER] and set it to [FOCUS].



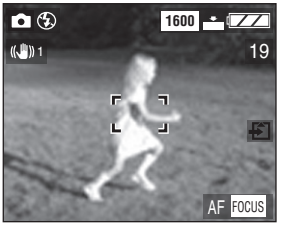
- Close the menu by pressing [MENU] button after finishing the setting.

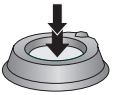
2 Aim the AF area to the point where you want to focus (P28) and press the [FOCUS] button.



- When the subject is focused, the focus indication ① lights up for 1 second.
- Even when pressing the shutter button halfway, the focus will not be changed unless you press the [FOCUS] button again.

3 Take the picture.





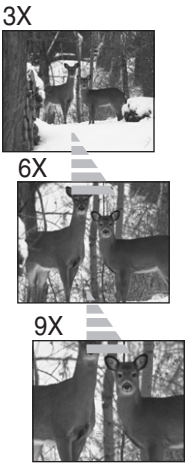
◇***Suggestions/Tips*** ◇

- When the AF Trigger is set to [FOCUS], you cannot focus on the subject by only pressing the shutter button halfway. Be sure to press the [FOCUS] button before taking pictures.
- When taking pictures normally, set the AF Trigger to [SHUTTER].
- When taking pictures in Simple mode [♥] or Self-portrait mode [ ], the AF Trigger is automatically set to [SHUTTER].

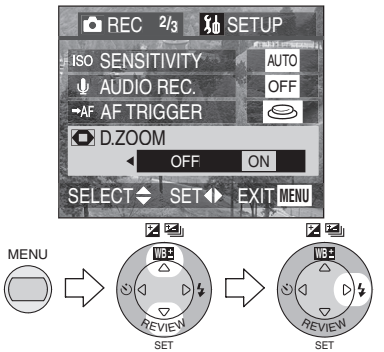
Using the Digital Zoom

Preparation

- Set the mode dial except for [▶]/[♥]. (P27)



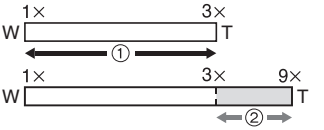
1 Select [D.ZOOM] and set it to [ON].



- Close the menu by pressing the [MENU] button after finishing the setting.
- When rotating the zoom lever with setting the [D.ZOOM] to [ON], the digital zoom indication appears. (P103)

■ Entering the digital zoom range

When you rotate the zoom lever to the extreme Tele position the on screen zoom indication may momentarily pause. This is not a malfunction.
You can enter the digital zoom range to continuously rotate the zoom lever to Tele or to release the zoom lever once and then rotate it to Tele again.



① Optical zoom
② Digital zoom

◇*Suggestions/Tips*◇

- It is possible to further magnify a subject already magnified 3 times with the optical zoom by 3 more times with the digital zoom, thereby reaching a maximum of 9 times.
- When using the digital zoom the picture quality becomes deteriorated.
- In the digital zoom range, the stabilizer function may not be effective.
- We recommend to use a tripod in the digital zoom range.
- The digital zoom is cancelled when the LCD monitor is turned off.

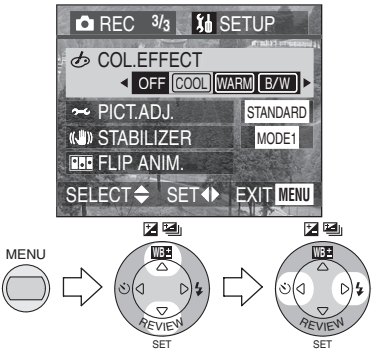
Using the Colour Effect

You can use 3 types of colour effects depending on the image of the picture.

Preparation

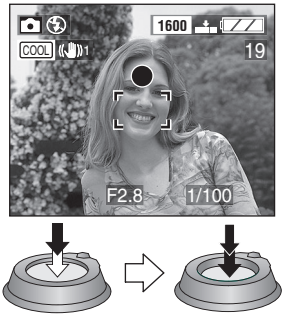
- Set the mode dial except for [▶]/[♥]/[🎞]. (P27)

1 Select [COL.EFFECT] and set the colour.



- [COOL]: The picture becomes bluish.
- [WARM]: The picture becomes reddish.
- [B/W]: The picture becomes black and white.
- Close the menu by pressing the [MENU] button after finishing the setting.

2 Take the picture.



◇***Suggestions/Tips*** ◇

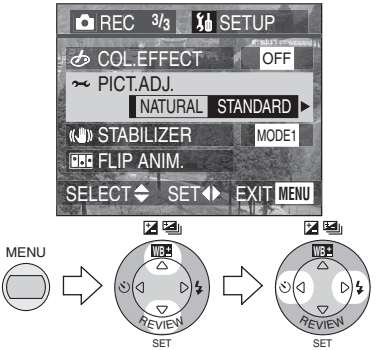
- [COOL] is effective when you want to add cold atmosphere to the picture, and [WARM] is effective when you want to express comfortable warmth in the scene.

Adjusting the Quality of the Picture (Picture Adjustment)

Preparation

- Set the mode dial except for [▶]/[♥]/[🎞]. (P27)

1 Select [PICT.ADJ.] and set it.



- [NATURAL]: The picture quality becomes softer.
- [VIVID]: The picture quality becomes sharper.
- Close the menu by pressing the [MENU] button after finishing the setting.

◇ ***Suggestions/Tips*** ◇

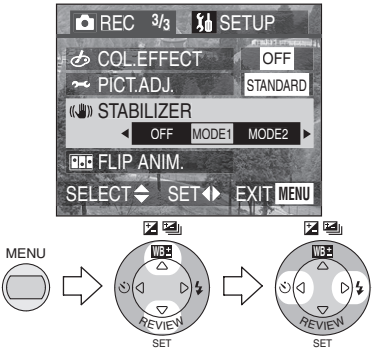
- In Simple mode [♥]/Motion image mode [🎞], you cannot adjust the picture quality.
- When you take pictures in dark places, noises may become visible.
  To avoid noises, we recommend setting [PICT.ADJ.] to [NATURAL].

Using the Optical Image Stabilizer

Preparation

- Set the mode dial except for [▶]/[♥]/[👤]. (P27)

1 Select [STABILIZER] and set it.



- [OFF]: ((✋))OFF
  When image stabilization is not desired or when using a tripod.
- [MODE1]: ((✋))1
  The stabilizer operates continuously and can assist during photocomposition.
- [MODE2]: ((✋))2
  The stabilizer function is in standby and activates at the moment the shutter captures the image. This mode offers a greater degree of stabilization.
- Close the menu by pressing the [MENU] button after finishing the setting.

◇***Suggestions/Tips*** ◇

- In [MODE2], the optical image stabilizer icon turns yellow soon after you turn the camera on to keep the stabilizer function activated.
- While the optical image stabilizer icon is displayed in yellow and if the camera receives a strong shock, the icon may be displayed in yellow for longer time than usual.
- While the optical image stabilizer icon is displayed in yellow, the stabilizer function may not work sufficiently.
- While the optical image stabilizer icon is displayed in yellow, the pictures on screen also be stabilized. (as same as in [MODE1])
- The stabilizer function may not work sufficiently in the following cases.
  – When too much jitter occurs.
  – In digital zoom range.
  – When taking pictures while following subjects in motion.
  – When the shutter speed is extremely slow due to nightscape or other reasons.
- Refer to P30 for information on jitter.
- The stabilizer function is fixed to [MODE2] in Simple mode [♥] and Self-portrait mode [👤].

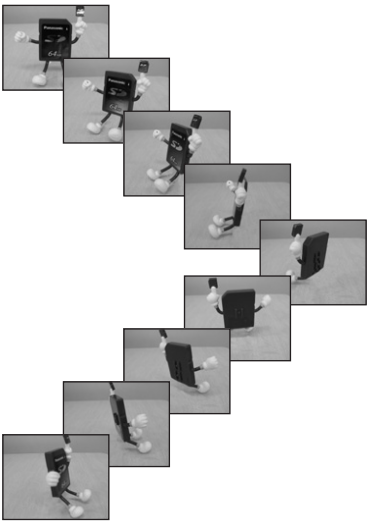
Creating Flip Animation

You can create motion image files by arranging pictures taken frame-by-frame.

Preparation

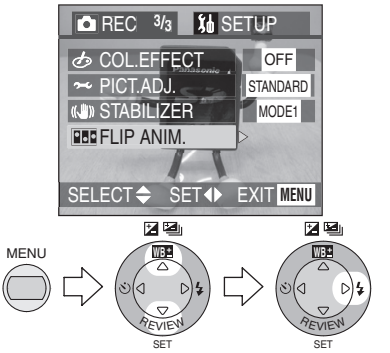
- Set the mode dial except for [▶]/[♥]/[🎞]. (P27)

Example:
When capturing images of the subject in sequence moving it little by little and aligning the images, the subject looks as if it were moving.

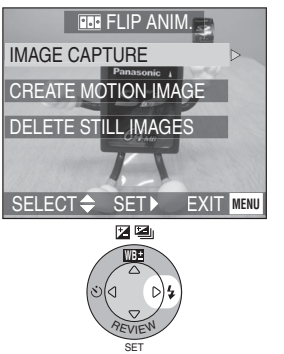


■ Capturing images

1 Select [FLIP ANIM.].

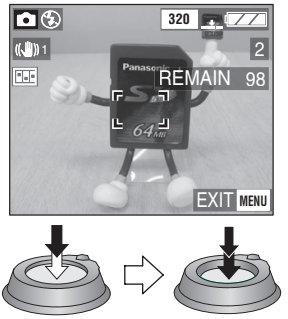


2 Select [IMAGE CAPTURE].



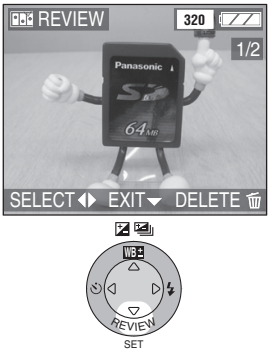
Creating motion images

3 Capture images for flip animation.



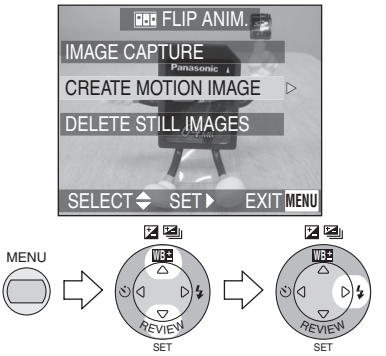
- You can take up to 100 pictures.

4 Check the image.

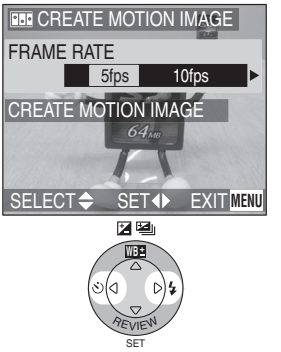


- You can check the previous or following image with ◄/►.
- Delete unnecessary images with [🗑] button.

5 Select [CREATE MOTION IMAGE].

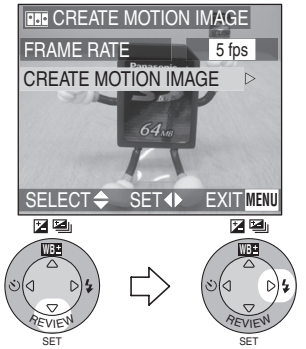


6 Select [FRAME RATE] and set the number of frames.



- [5fps]:
  5 frames/sec.
- [10fps]:
  10 frames/sec. (The motion images become smoother.)

7 Select [CREATE MOTION IMAGE] and create a flip animation.



- The file number appears for about 1 second after creating a flip animation.
- Including the created images, the flip animation is counted as 1 animation image.
- Close the menu by pressing the [MENU] button 3 times after finishing the setting.

■ Playing back a created flip animation

Follow the same procedure as you play back motion images. (P74)

■ Deleting all of still images used for flip animation

When selecting [DELETE STILL IMAGES] in flip animation screen, a confirmation screen appears. Select [YES] and then press ▼.

◇*Suggestions/Tips*◇

- Flip animations are created as motion image files. (Extension: .MOV)
- The number of pixel is 320×240.
- You cannot use pictures with audio, burst mode and auto bracket.
- The images in each frame do not appear in normal review. (P34)
- Flip animations may not be played by other equipment.
- The flip animations recorded with setting [FRAME RATE] to [5fps] cannot be played back on the camera which does not support [5fps] of motion rate.
- Audio cannot be recorded on flip animations. However, you may hear noises when playing back with other equipment without a mute function.
- The number of recordable images is an approximation.

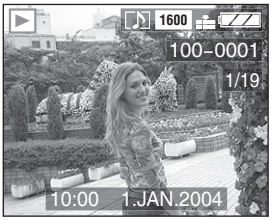
Playing Back Pictures with Audio

Preparation

- Set the mode dial to [▶]. (P27)

1 Select the picture with audio icon [♪].

2 Play back the audio.



- You can hear audio from the speaker.
- To adjust the sound volume, refer to P24.

◇ ***Suggestions/Tips*** ◇

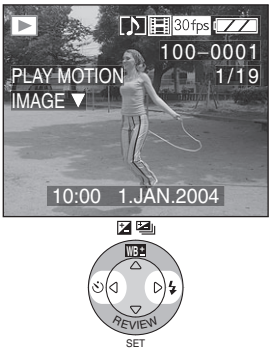
- The picture with audio cannot be resized (P86) or trimmed (P88).

Playing Back Motion Images

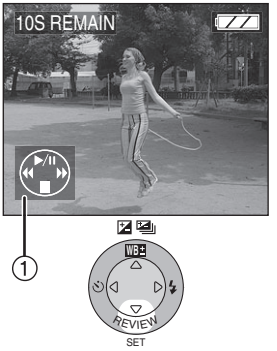
Preparation

- Set the mode dial to [▶]. (P27)

1 Select the picture with the motion image icon [ ].



2 Play back the motion images.



- Motion image playback stops and the normal playback is restored by pressing ▼.
- The icon ① is corresponding to the ▲/▼/◀/▶.

■ Fast forwarding/Fast rewinding

During motion image playback, continue pressing ◀/▶.

▶: Fast forward

◀: Fast rewind

- When releasing the button, it turns to normal motion image playback.

■ To pause

Press ▲ during motion image playback.

- Press ▲ again to cancel pause.

- To adjust the sound volume, refer to P24.

◇*Suggestions/Tips*◇

- You cannot use the zoom function while playing back or pausing motion images.
- The file format that can be played back with this camera is QuickTime Motion JPEG.
- Some QuickTime Motion JPEG files recorded by a PC or other equipment may not be played back with this camera.
- When playing back motion images that have been recorded with other equipment, the quality of images may be deteriorated or the images may not be able to be played back.
- When using a high capacity card, it is possible that fast rewinding may be slower than usual.

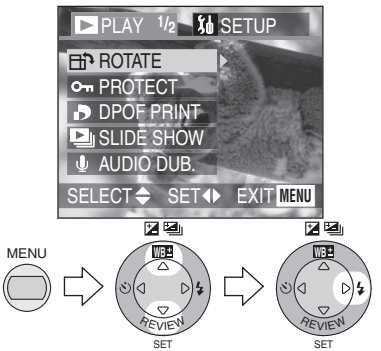
Rotating the Picture

You can rotate the recorded pictures in increments of 90°.
This is a convenient function to play back pictures on TV.

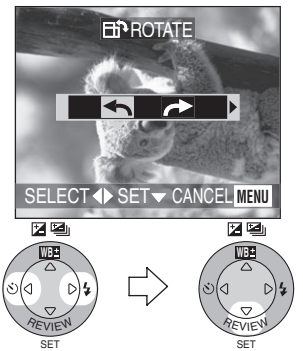
Preparation

- Set the mode dial to [▶]. (P27)

1 Select [ROTATE].



2 Select the direction to rotate the picture.



- [↶]: The picture rotates counter-clockwise in increments of 90°.
- [↷]: The picture rotates clockwise in increments of 90°.
- Close the menu by pressing the [MENU] button after finishing the setting.

■ Example

When rotating clockwise (↷)

Original Picture

◇*Suggestions/Tips*◇

- Still pictures can only be rotated in normal playback. When playing back rotated pictures in zoom playback or multi playback, pictures appear in original angle.
- The recording date of the picture is changed to the date when you rotate the picture.
- Protected pictures cannot be rotated.
- Rotated pictures appear on a PC only when an OS or a software compatible with Exif is installed in the PC.
- Exif is the file format for still pictures, to which can be added recording information and other, established by JEITA [Japan Electronics and Information Technology Industries Association].

Setting the Picture to be Printed and the Number of Prints (DPOF Print Setting)

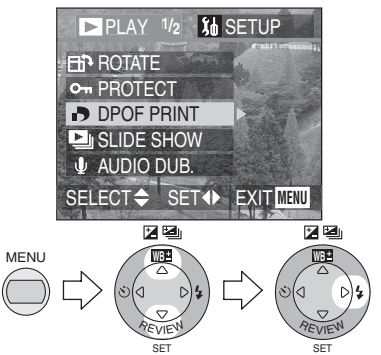
DPOF (Digital Print Order Format) is a system that allows the user to select which pictures are to be printed on compatible photo printers. DPOF also allows the user to set how many copies of each picture will be printed. Many commercial photo printing services now use DPOF.

Preparation

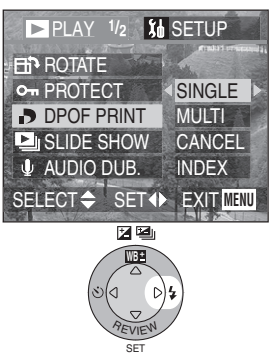
- Set the mode dial to [▶]. (P27)

■ Single setting/cancel

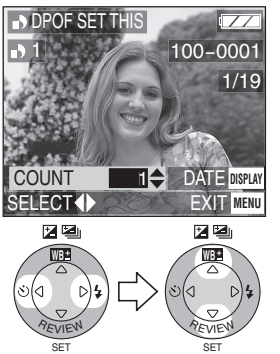
1 Select [DPOF PRINT].



2 Select [SINGLE].



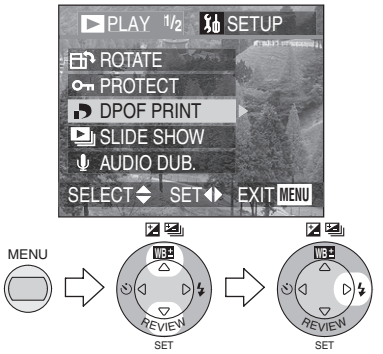
3 Select the picture and set the number of prints.



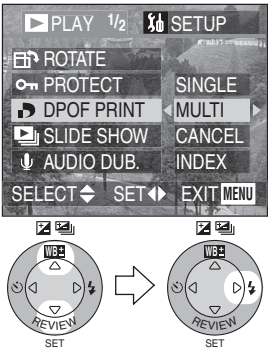
- The number of prints can be set from 0 to 999.
- The number of prints icon [1] appears.
- When the number of prints is set to “0”, DPOF print setting is cancelled.
- Close the menu by pressing the [MENU] button 2 times after finishing the setting.

Multi setting/cancel

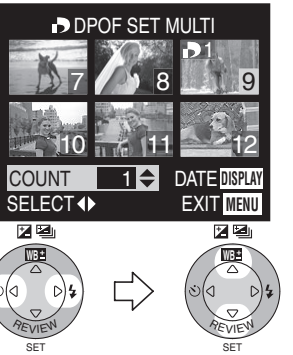
1 Select [DPOF PRINT].



2 Select [MULTI].



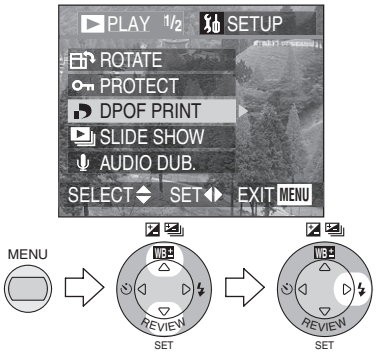
3 Select the pictures and set the number of prints.



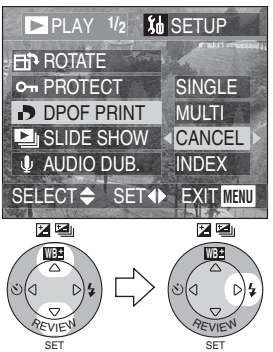
- The number of prints can be set from 0 to 999.
- The number of prints icon [1] appears.
- Repeat step 3.
- When the number of prints is set to “0”, DPOF print setting is cancelled.
- Close the menu by pressing the [MENU] button 2 times after finishing the setting.

To cancel all settings

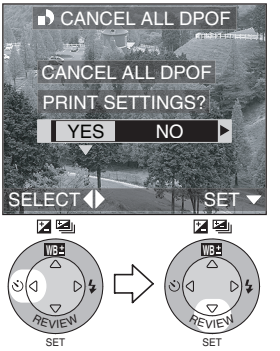
1 Select [DPOF PRINT].



2 Select [CANCEL].



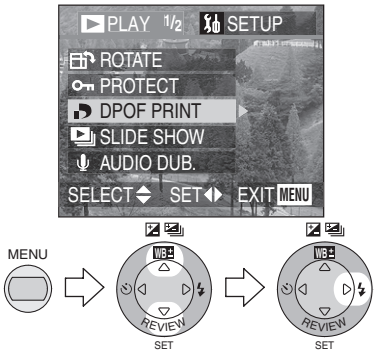
3 Select [YES] to cancel all settings.



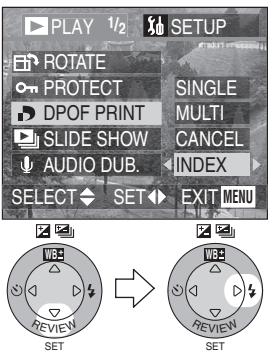
- Close the menu by pressing the [MENU] button after cancelling the setting.

Index setting/cancel

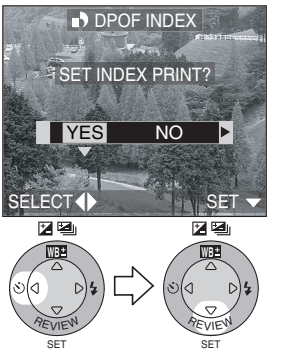
1 Select [DPOF PRINT].



2 Select [INDEX].

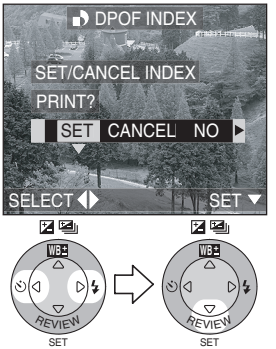


3 Select [YES] to index setting.



- Close the menu by pressing the [MENU] button after finishing the setting.

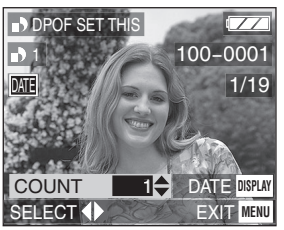
When the index is already set



- Close the menu by pressing the [MENU] button after finishing the setting.

To print the date

You can set/cancel the printing with the recorded date each press of the [DISPLAY] button when setting the number of prints.



- The date print icon [DATE] appears.
- When you ask photo studios for printing, be sure to order the printing of the date. For further information, ask a photo studio. Depending on the studio, it may not be printed.

◇*Suggestions/Tips*◇

- DPOF print setting is a convenient function when you print pictures with printers supporting DPOF printing.
- DPOF is the abbreviation for Digital Print Order Format. This feature allows you to designate which pictures will be printed.
- The setting of DPOF print will not be applied to the DPOF setting of Slide Show.
- If the file is not based on the DCF standard, the DPOF print setting cannot be set. DCF is an abbreviation of [Design rule for Camera File system], stipulated by JEITA [Japan Electronics and Information Technology Industries Association].
- When setting the DPOF print, this camera will overwrite any previous DPOF print settings made by other equipment.

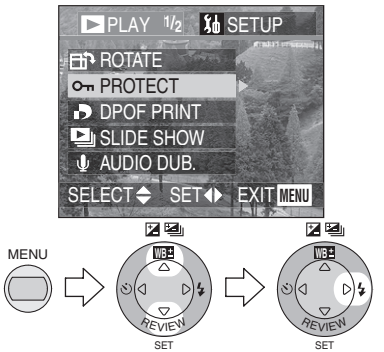
Preventing Accidental Erasure of the Picture

Preparation

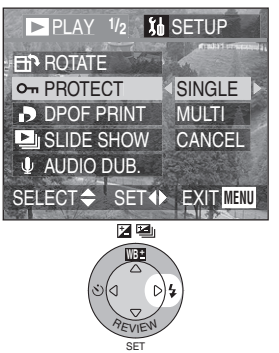
- Set the mode dial to [▶]. (P27)

■ Single setting/cancel

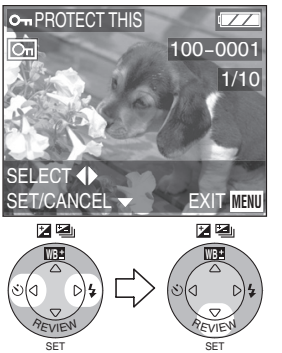
1 Select [PROTECT].



2 Select [SINGLE].



3 Select the picture and set/cancel the protection.



- [SET]:
  The protect icon [⊙] appears.
- [CANCEL]:
  The protect icon [⊙] disappears.
- Close the menu by pressing the [MENU] button 2 times after finishing the setting.

■ Multi setting/To cancel all settings

Perform the same operation as in [Setting the Picture to be Printed and the Number of Prints (DPOF Print Setting)]. (P76–78)

◇*Suggestions/Tips* ◇

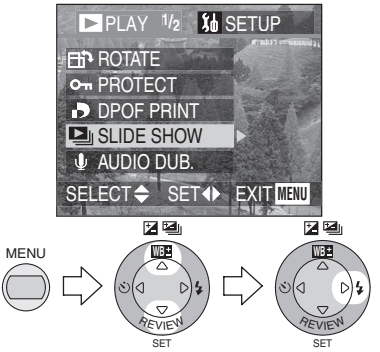
- While this feature protects the pictures from accidental erasure, formatting the card will permanently delete all data. (P90)
- If you want to delete protected pictures, cancel the protect setting first.
- The protect setting may not be effective in other equipment.
- Sliding the SD Memory Card Write-Protect switch to [LOCK] prevents the picture from deletion even if the protection is not set.
- The audio dubbing cannot be used with protected pictures. (P85)

Playing Back with Slide Show

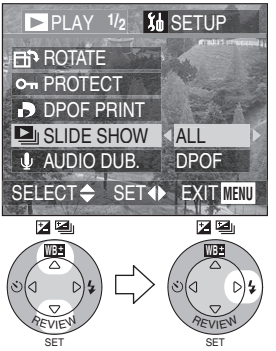
Preparation

- Set the mode dial to [▶]. (P27)

1 Select [SLIDE SHOW].

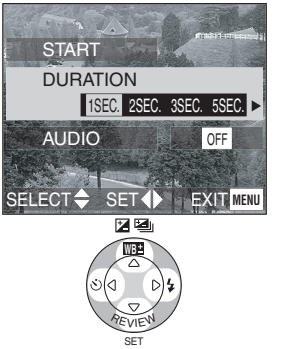


2 Select the type of pictures to play back.



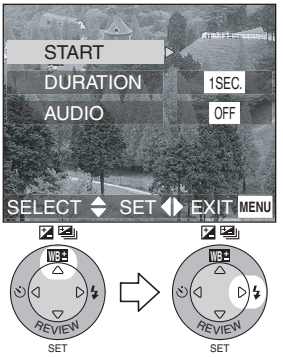
- [ALL]:
  for playing back all pictures
- [DPOF]:
  for playing back the pictures DPOF Slide Show is set

3 Select the following items.



- [DURATION]:
  It can be set among 1, 2, 3 and 5 seconds.
- [AUDIO]:
  By setting it to [ON], the audio of the pictures with audio can be played back during Slide Show.
- [DPOF SET] (Only when setting to [DPOF]):
  You can select the pictures you want to set to the Slide Show.
- [CANCEL ALL] (Only when setting to [DPOF]):
  You can cancel the DPOF Slide Show setting.

4 Select [START].



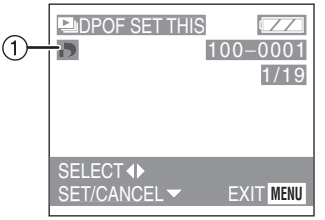
5 By pressing the [MENU] button, the Slide Show stops.

■ SD Slide Show

If setting the SD Slide Show with the [SD Viewer for DSC] which is in the supplied CD-ROM, when playing back, the confirmation screen appears. Select [YES] and press ▼ to start the SD Slide Show. Select [NO] and press ▼ to start normal playback.

◇*Suggestions/Tips*◇

- When setting the DPOF Slide Show, DPOF icon ① appears on the picture in green.
- When setting the DPOF Slide Show to the picture with DPOF printing, both of DPOF icon ① and the number of prints appear on the picture in green.
- When only the DPOF printing is set on the picture, the DPOF icon ① and the number of prints appear in white.



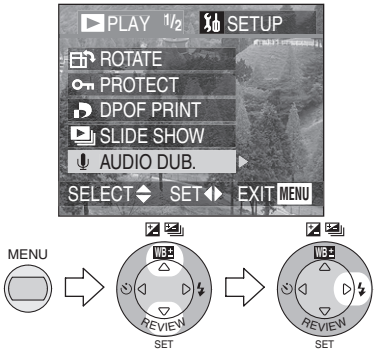
- In motion image playback, Slide Show is not available.
- The DPOF setting of Slide Show will not be applied to the DPOF printing.
- DPOF Slide Show cannot be performed without the DPOF setting of Slide Show.
- DPOF setting with the [SD Viewer for DSC] in the supplied CD-ROM is only for printing. Please set DPOF Slide Show with this camera to play back pictures in DPOF Slide Show.
- When setting the DPOF Slide Show, this camera will overwrite any previous DPOF settings made by other equipment.

Adding Audio to Recorded Pictures (Audio Dubbing)

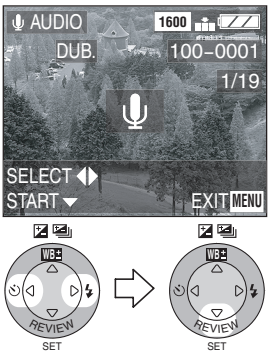
Preparation

- Set the mode dial to [▶]. (P27)

1 Select [AUDIO DUB.].

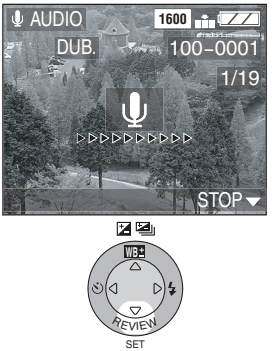


2 Select the picture and start audio recording.



- When audio has already been recorded, the confirmation screen appears. Press ◄ to select [YES], and press ▼ to start audio recording. (The original audio is overwritten.)
- The audio dubbing cannot be used with motion images or protected pictures.

3 Stop audio recording.



- Even if you do not press ▼, after about 10 seconds the audio recording stops automatically.
- Close the menu by pressing the [MENU] button 2 times after finishing the setting.

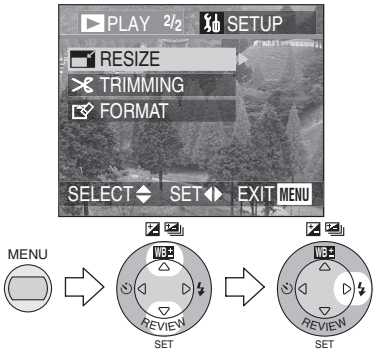
Resizing the Pictures

This function is useful if you want to reduce the file size of the picture, in those cases when it needs to be attached to an E-mail or uploaded it to a web site.

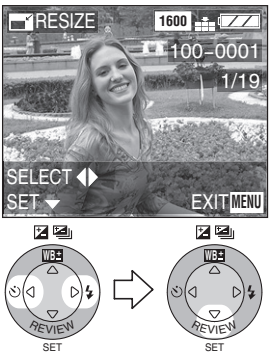
Preparation

- Set the mode dial to [▶]. (P27)

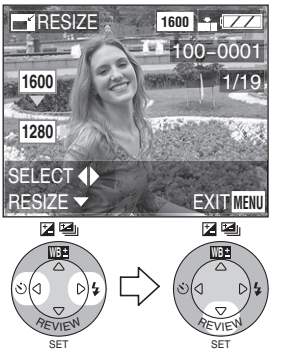
1 Select [RESIZE].



2 Select the picture and set it.

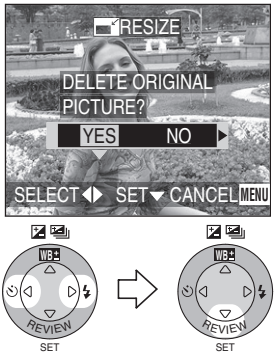


3 Select the size and set it.



- [1600]: 1600×1200 pixels
- [1280]: 1280×960 pixels
- [640]: 640×480 pixels

4 Select [YES] or [NO] and set it.



- When you select [YES], the picture is overwritten.
- When the original picture is protected, you cannot overwrite the resized picture.
- Close the menu by pressing the [MENU] button 2 times after finishing the resizing.

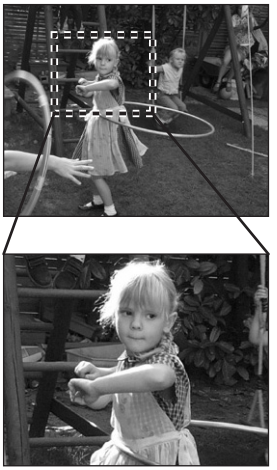
◇***Suggestions/Tips*** ◇

- The following pictures cannot be resized.
  - –Pictures not over 640×480 pixels
  - –Pictures recorded with setting the picture size to [HDTV]
  - –Motion images
  - –Flip animation
  - –Pictures with audio
  - –Rotated pictures (You can resize them if you turn them back.)
- It may not be possible to resize the pictures recorded with other equipment.

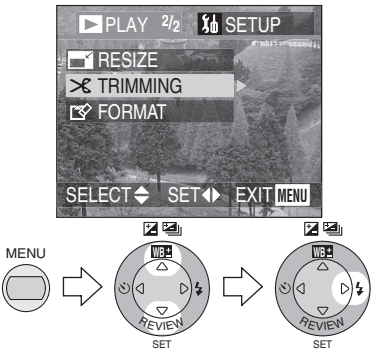
Trimming the Pictures

Preparation

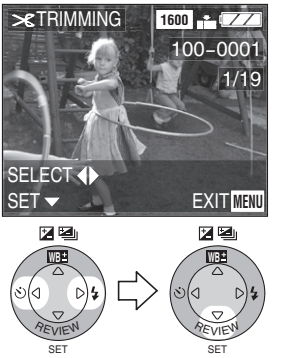
• Set the mode dial to [▶]. (P27)



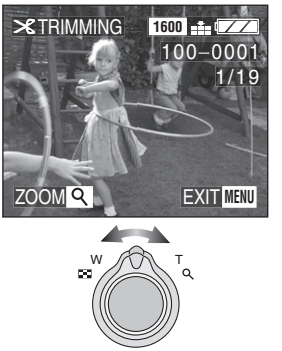
1 Select [TRIMMING].



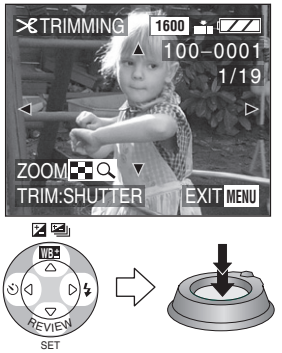
2 Select the picture to trim.



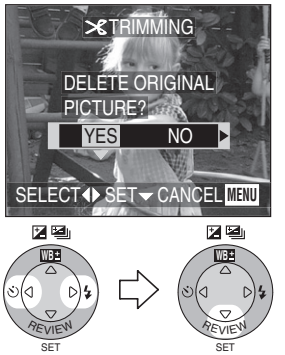
3 Enlarge or decrease the picture.



4 Shift the picture and press the shutter button fully to set.



5 Select [YES] or [NO] and set it.



- When you select [YES], the picture is overwritten.
- When the original picture is protected, you cannot overwrite the trimmed picture.
- Close the menu by pressing the [MENU] button 2 times after finishing the trimming.

◇*Suggestions/Tips*◇

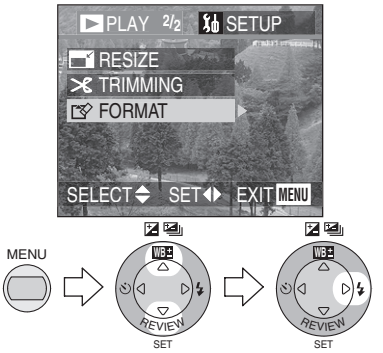
- The following pictures cannot be trimmed.
  - Pictures equal to or smaller than 640×480 pixels
  - Pictures recorded with setting the picture size to [HDTV]
  - Motion images
  - Flip animation
  - Pictures with audio
  - Rotated pictures (You can trim them if you rotate them back.)
- It may not be possible to trim pictures recorded with other equipment.
- The picture size of the trimmed pictures may become smaller than that of the original one depending on the cut size.
- The picture quality of the trimmed picture may be deteriorated.

Formatting the Card

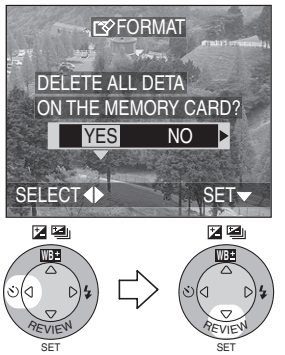
Preparation

- Set the mode dial to [▶]. (P27)

1 Select [FORMAT].



2 Select [YES] to format.



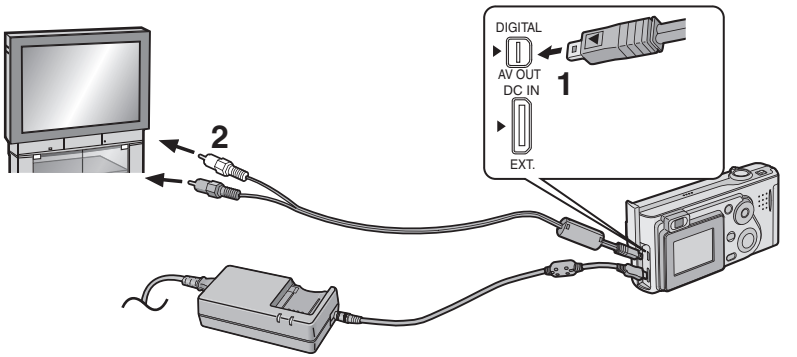
◇***Suggestions/Tips*** ◇

- Usually, it is not necessary to format the card (initializing). Format the card when the message [MEMORY CARD ERROR] appears.
- If the card has been formatted by a PC or other equipment, format the card on the camera again.
- After formatting, recorded pictures and any other data cannot be recovered.
- **If the card is formatted all images and data will be permanently erased. They cannot be reclaimed. If any important pictures are on the card, please copy them to your PC before proceeding.**
- During formatting, do not turn the camera off.
- When the remaining battery power (P11) is low, use the AC adaptor.
- If the card is protected, you cannot format the card.
- If the card cannot be formatted, consult your nearest servicentre.

Playing Back Pictures with a TV Screen

■ Playing back pictures with AV cable (supplied)

• Turn the camera and the TV off.



1 Connect the AV cable to the [AV OUT] socket of the camera.

• Align the [◄] mark on the AV cable and the [►] mark on the [AV OUT] socket.

2 Connect the AV cable to the video input and the audio input sockets of the TV.

• Yellow: to the video input socket
• White: to the audio input socket

3 Turn the TV on and select external input.

4 Turn the camera on and then set the mode dial to playback mode [▶].

■ Viewing pictures in other countries

When setting [VIDEO OUT] on the menu, you can view pictures on a TV in other countries (regions) which use the NTSC or PAL system.

■ Playback pictures on TV with SD Memory Card slot

An SD Memory Card can be played back on TVs with an SD Memory Card slot.
If you play back pictures recorded using [HDTV] mode on a High-Definition TV, (HDTV has 16:9 aspect) the picture quality will be higher.

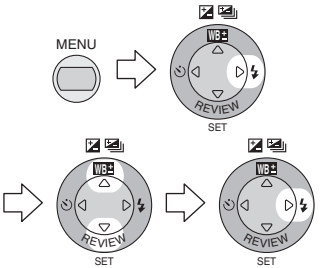
◇***Suggestions/Tips*** ◇

• When connecting to a TV, we recommend using the AC adaptor as the power source.
• Use the supplied AV cable only.
• Only when the mode dial is set to Playback mode [▶], the image is displayed on the TV.
• Read the TV operating instructions too.

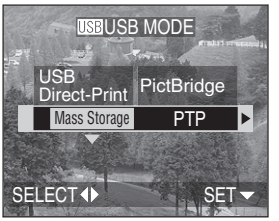
Before Connecting with USB Connection Cable

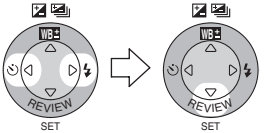
Select the USB communication system according to the OS of your PC or your printer before connecting them to the camera with the USB connection cable (supplied).
Set the items on [USB MODE] in the [SETUP] menu. (P23)

1 Select [USB MODE].
(In the recording mode)



2 Select [Mass Storage] or [PTP].

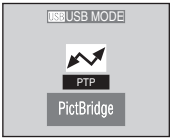




USB mode	PC to be connected	Printer to be connected
Mass Storage (USB Direct-Print)	Windows® XP Home Edition, Windows XP Professional, Windows 2000 Professional, Windows Me, Windows 98/98 SE or Mac OS X (10.1 or above), Mac OS 9.x	Printers supporting USB Direct-Print.
PTP (PictBridge)	Windows XP Home Edition, Windows XP Professional or Mac OS X	Printers supporting PictBridge.

When using Windows 2000 Professional, Windows Me, Windows 98/98 SE or Mac OS 9.x

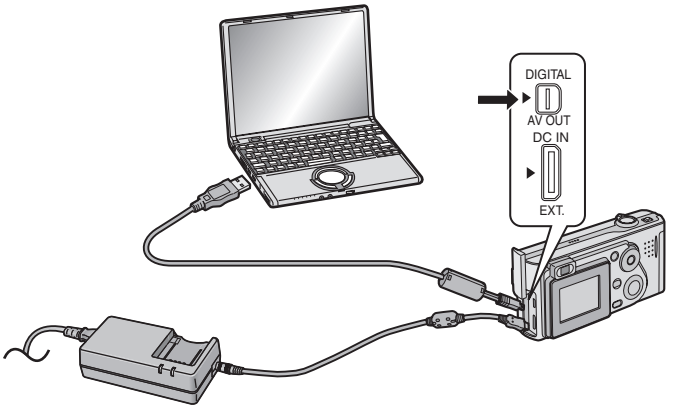
- When connecting the camera to a PC, do not set [USB MODE] to [PTP]. (When the camera is shipped, [Mass Storage] is selected.)
- When using Windows 98/98 SE, install the USB driver before connecting. (When using Windows Me/2000/XP, Mac OS 9.x and Mac OS X, you do not have to install the USB driver.)
- When connecting to the PC which includes the above-mentioned OS with setting the [USB MODE] to [PTP], the messages shown on the right appear on the LCD monitor of the camera.



The following messages appear for each OS on the display of the PC. Select [Cancel] to close the window and disconnect the PC.

OS	Message
Windows 2000 Professional	[Welcome to the Found New Hardware Wizard]
Windows Me Windows 98/98 SE	[New Hardware Found]→ [Add New Hardware Wizard] (When you connect to the PC more than 2 times, only [Add New Hardware Wizard] appears.)
Mac OS 9.x	[Software needed for the USB device "DMC-FX5 or DMC-FX1" is not available. Would you like to look for the software on the Internet?]

Connecting to a PC (Mass Storage)



1 Turn the camera on and then set [USB MODE] to [Mass Storage]. (P92)

2 Connect the camera to a PC via the USB connection cable (supplied).

[Windows]
The drive appears on the [My Computer] folder.

- If it is the first time for you to connect the camera to a PC, the required driver is installed automatically so that the camera can be recognized by the Windows Plug and Play, then it appears on the [My Computer] folder.

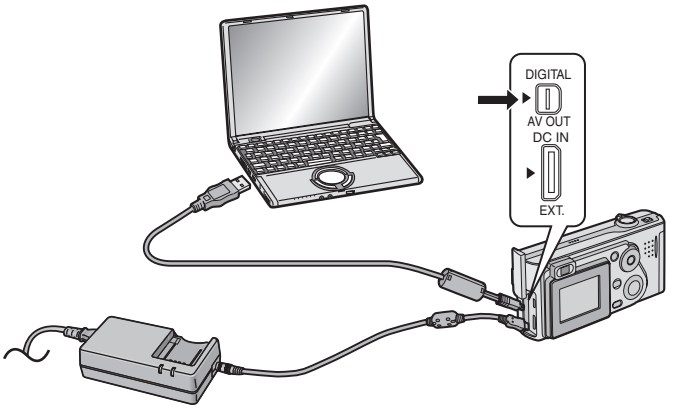
[Macintosh]
The drive is shown on the screen.

◇***Suggestions/Tips*** ◇

- The flash/access indicator lights during communication.
- When connecting to a PC, we recommend using the AC adaptor as the power source.
- If the remaining battery power becomes low during communication, the status indicator blinks and the alarm beeps. In this case, stop the communication. Then turn the camera off and charge the battery.
- Use the supplied USB connection cable only.

Connecting to a PC (PTP)

Do not follow the setting below on the OS except for Windows XP and Mac OS X.



1 Turn the camera on and then set [USB MODE] to [PTP]. (P92)

2 Connect the camera to a PC via the USB connection cable (supplied).

[Windows]
The camera icon appears on the [My Computer] folder.

- If it is the first time for you to connect the camera to a PC, the required driver is installed automatically so that the camera can be recognized by the Windows Plug and Play, then the camera icon appears on the [My Computer] folder.

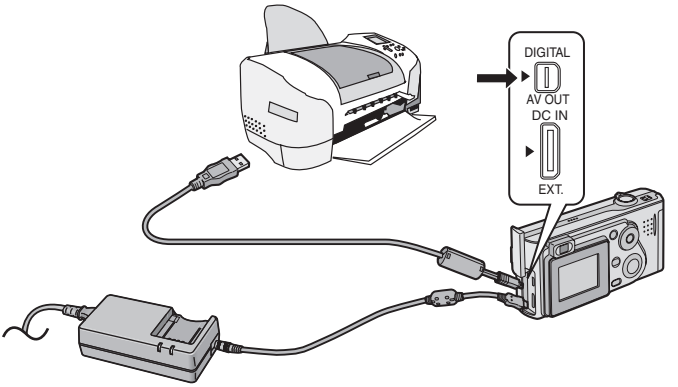
[Macintosh]
You can read pictures with image capture or iPhoto.

◇***Suggestions/Tips*** ◇

- Refer to P93 carefully when connecting to the OS except for Windows XP and Mac OS X with setting [USB MODE] to [PTP].
- The flash/access indicator lights during communication.
- When connecting to a PC, we recommend using the AC adaptor as the power source.
- If the remaining battery power becomes low during communication, the status indicator blinks and the alarm beeps. In this case, stop the communication. Then turn the camera off and charge the battery.
- It may take time to display the communication screen depending on the PC.
- You can only load pictures from the camera and cannot write them on the card or delete them.
- Use the supplied USB connection cable only.
- When there are 1000 or more pictures on the card, the pictures may not be imported.
- When the PC recovers from the standby mode while connecting it to a camera with USB connection cables, they may not properly communicate each other.

Connecting to a Printer

By connecting the camera directly to a printer supporting PictBridge or USB Direct-Print via the USB connection cable (supplied), you can select the pictures to be printed or start printing.



1 Turn the camera on and then set the [USB MODE] to [PTP] (PictBridge) or [Mass Storage] (USB Direct-Print). (P92)

2 Turn on a printer.

3 Connect the camera to the printer via the USB connection cable (supplied).

◇ ***Suggestions/Tips*** ◇

- Ask the manufacturer of the printer about the corresponding models. (Read the printer operating instructions too.)
- If the remaining battery power becomes low during communication, the status indicator blinks and the alarm beeps. In this case, stop the communication. Then turn the camera off and charge the battery.
- When connecting to a printer, we recommend using the AC adaptor as the power source.
- Disconnect the USB connection cable and DC cable after printing.
- Use the supplied USB connection cable only.

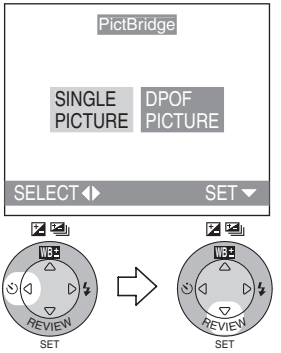
Using a Printer (PictBridge)

Preparation

- Connect the camera to a printer. (P97)
- Set the paper size and print quality. (Read the printer operating instructions.)

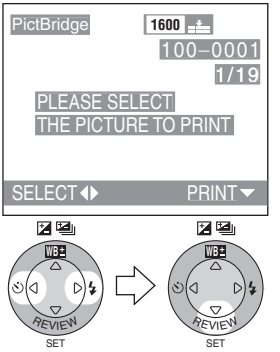
■ Single picture

1 Select [SINGLE PICTURE].

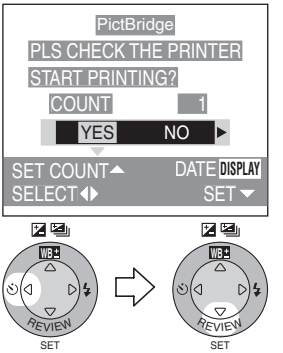


- The screen shown in step 2 appears when DPOF print is not set or the printer does not support DPOF print.

2 Select the picture to print.



3 Select [YES] and print.



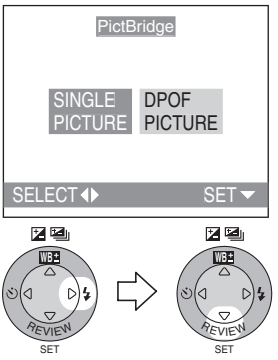
- Press the [DISPLAY] button to print the date. (Only when connecting to the printer supporting to printing the date.)
- Press ▲ and then press ◄/► to set the number of prints. Press ▼ to print pictures.
- Press the [MENU] button to cancel printing.

Preparation

- Connect the camera to a printer. (P97)
- Set the DPOF print with this camera in advance. (P76)
- Set the paper size and print quality. (Read the printer operating instructions.)

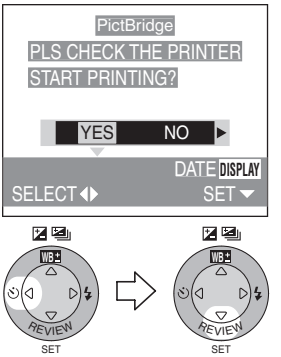
■ DPOF picture

1 Select [DPOF PICTURE].



- Press the [MENU] button, and you can change the DPOF print setting. (P76)
- When printing under the new settings, disconnect the USB connection cable and connect it to the printer again.

2 Select [YES] and print.



- Press the [DISPLAY] button to print the date. (Only when connecting to the printer supporting to printing the date.)
- Press the [MENU] button to cancel printing.

◇*Suggestions/Tips*◇

- When the total number of prints becomes 1000 or more, the number of remaining pictures may appear as [---] on the screen.
- When connecting to a printer not supporting DPOF, DPOF printing cannot be set. (The DPOF print selecting screen does not appear.)
- Do not disconnect the USB connection cable when the cable disconnection warning icon [ ] is indicated.
- When the [●] indication lights in yellow during printing, check if there is no malfunction on the printer.
- When the printer does not support the date printing by DPOF setting, the date may not be printed as it is on date setting in DPOF setting.
- The setting on the printer may have priority over the setting on the camera in the date print. Also check the date print setting on the printer.

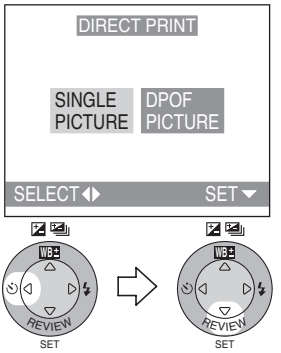
Using a Printer (USB Direct-Print)

Preparation

- Connect the camera to a printer. (P97)
- Set the paper size and print quality. (Read the printer operating instructions.)

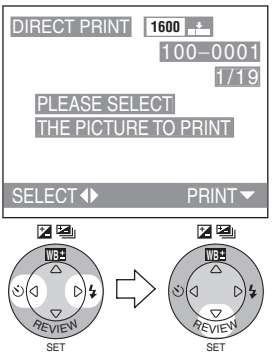
■ Single picture

1 Select [SINGLE PICTURE].

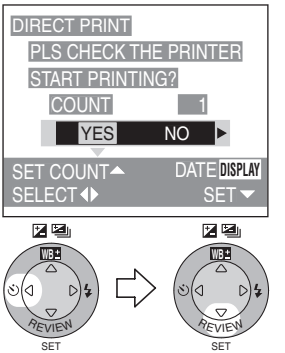


- The screen shown in step 2 appears when DPOF print is not set.

2 Select the picture to print.



3 Select [YES] and print.



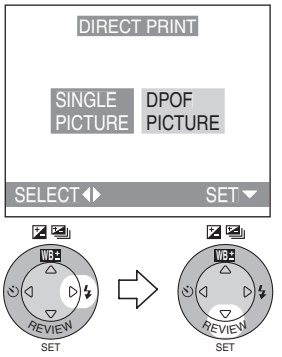
- Press the [DISPLAY] button to print the date.
- Press ▲ and then press ◄/► to set the number of prints. Press ▼ to print pictures.
- Press the [MENU] button to cancel printing.

Preparation

- Connect the camera to a printer. (P97)
- Set the DPOF print with this camera in advance. (P76)
- Set the paper size and print quality. (Read the printer operating instructions.)

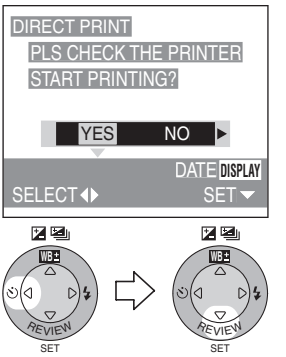
■ DPOF picture

1 Select [DPOF PICTURE].



- Press the [MENU] button, and you can change the DPOF print setting. (P76)
- When printing under the new settings, disconnect the USB connection cable and connect it to the printer again.

2 Select [YES] and print.



- Press the [DISPLAY] button to print the date.
- Press the [MENU] button to cancel printing.

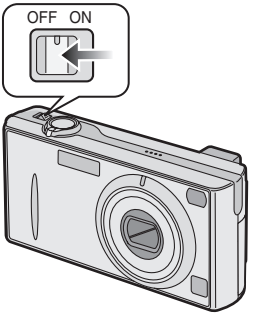
◇*Suggestions/Tips*◇

- When the total number of prints becomes 255 or more, the number of remaining pictures appears as [---] on the screen.
- When you set the date print setting by pressing the [DISPLAY] button, the date is printed regardless of the date print setting on DPOF setting. (P80)
- When the printer does not support the date printing by DPOF setting, the date may not be printed as it is on date setting in DPOF setting.
- The setting on the printer may have priority over the setting on the camera in the date print. Also check the date print setting on the printer.

After Use

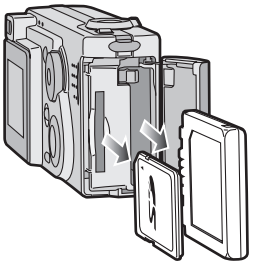
After using the camera, it is recommended that you complete the following steps:

1 Turn the camera off.



- Check that the lens is retracted.

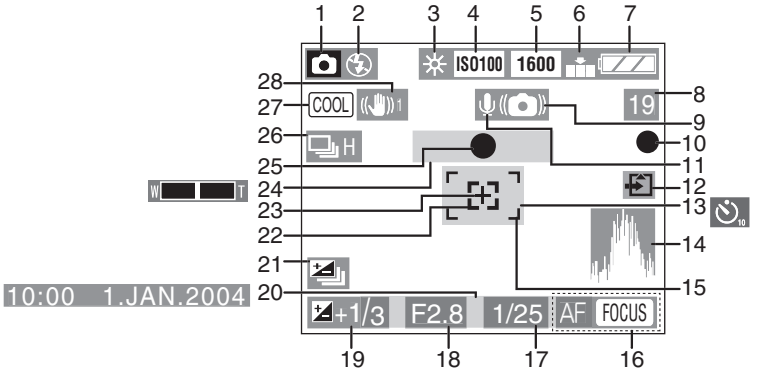
2 Remove the card and the battery. (P13, 17)



◇***Suggestions/Tips*** ◇

- If you will not be using the camera for a long time,
  - Remove the battery. (When you insert the battery again, set the clock.)
  - Do not keep the camera in a place where it will be subjected to high temperatures, high humidity or soot. Fungus may be attached to the lens or condensation may occur.
  - Keep the camera in a cool, dry and well-ventilated place and avoid storing near dust or chemicals.
  - We recommend keeping it in a closed case with the desiccant.

Screen Display



In recording

1 Recording mode (P27)

2 Flash (P36)

3 White balance (P56)

4 ISO sensitivity (P62)

5 Picture size (P59)

6 Quality (data compression ratio) (P60)
10 fps / 30 fps (Motion rate):
In Motion image mode (P54)

7 Battery indication (P11)

8 Frame/Time remain
In Motion image mode: e.g. 11S

9 Jitter alert indication (P30)

10 Recording indication

11 Audio recording (P63)

12 Card access indication (P15)

13 Self-timer (P41)

14 Histogram (P26)

15 AF area (P28)

16 AF Trigger (P64)

17 Shutter speed indication (P28)

18 Aperture indication (P28)

19 Exposure compensation (P39)

20 Current date and time (P19)
- This is displayed for about 5 seconds when turning the camera on, setting the clock and after switching from the Playback mode to the Recording mode.

21 Auto bracket (P40)

22 Spot AF area (P61)

23 Spot metering target (P61)

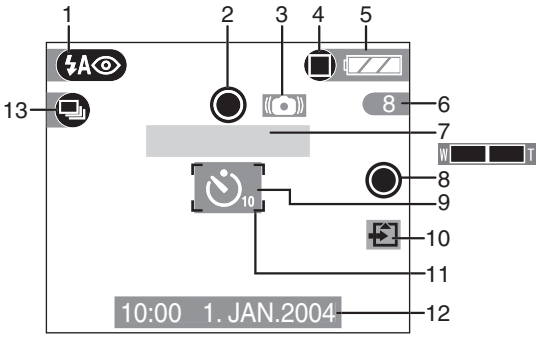
24 Zoom (P35)
W T :
Digital zoom ON (P66)

25 Focus indication (P28)

26 Burst (P42)

27 Colour effect (P67)

28 Optical image stabilizer (P69)



In recording in Simple mode

1 Flash (P36)

2 Focus indication (P28)

3 Jitter alert indication (P30)

4 Picture mode (P32)

5 Battery indication (P11)

6 Frame remain

7 Zoom (P35)

8 Recording indication

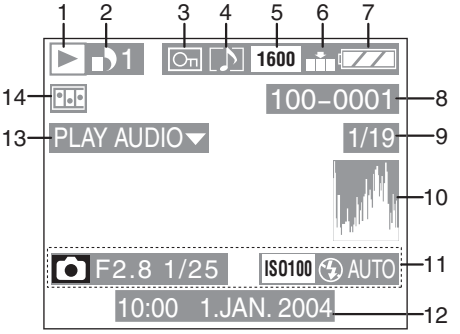
9 Self-timer (P41)

10 Card access indication (P15)

11 AF area (P28)

12 Current date and time (P19)
- This is displayed for about 5 seconds when turning the camera on, setting the clock and after switching from the Playback mode to the Simple mode.

13 Burst (P42)



■ In playback

1 Playback mode

2 DPOF (P76, 83)
1 (White):
DPOF setting for printing
1 (Green):
DPOF setting for Slide Show
1 (Green with number of prints):
DPOF setting for printing and Slide Show

3 Protected picture (P81)

4 Picture with audio (P73)

5 Picture size (P59)
: In Motion image mode

6 Quality (data compression ratio) (P60)
5 fps / 10 fps / 30 fps :
In Motion image mode
In Simple mode:
: ENLARGE
: 4″×6″/10×15cm
: E-MAIL

7 Battery indication (P11)

8 Folder/File number

9 Page number/Total pictures

10 Histogram (P26)
• It will be displayed when the [DISPLAY] button is pressed.

11 Recording information (P25) (Recording mode/Aperture indication/Shutter speed/ISO sensitivity/Flash/White balance)
• It will be displayed when the [DISPLAY] button is pressed.

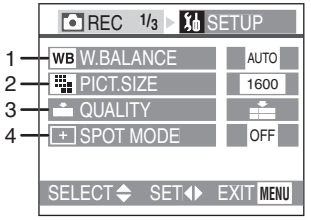
12 Recorded date and time

13 Audio playback (P73)
PLAY MOTION IMAGE ▼ :
In Motion image mode (P74)

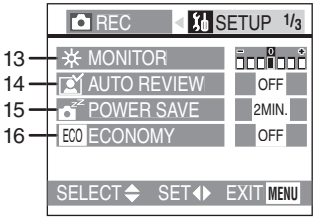
14 Flip animation (P70)

The Menu Items

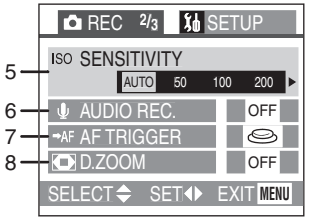
[REC] mode menu



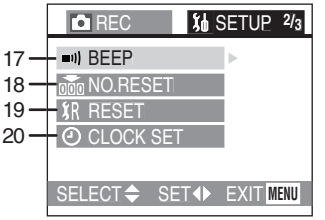
1 W.BALANCE (P56)
2 PICT.SIZE (P59)
3 QUALITY (P60)
4 SPOT MODE (P61)



13 MONITOR (P22)
14 AUTO REVIEW (P22)
15 POWER SAVE (P22)
16 ECONOMY (P23)

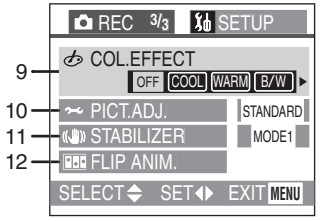


5 SENSITIVITY (P62)
6 AUDIO REC. (P63)
7 AF TRIGGER (P64)
8 D.ZOOM (P66)

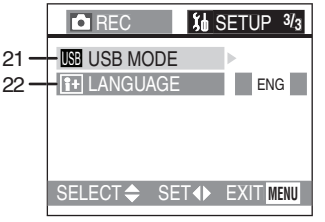


17 BEEP (P23)
18 NO.RESET (P23)
19 RESET (P23)
20 CLOCK SET (P19)

(The screen is displayed as illustrated in DMC-FX5.)



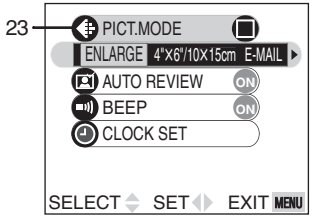
9 COL.EFFECT (P67)
10 PICT.ADJ. (P68)
11 STABILIZER (P69)
12 FLIP ANIM. (P70)



21 USB MODE (P92)
22 LANGUAGE (P24)

■ Simple mode menu

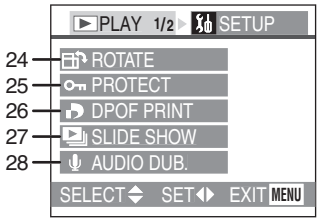
• For items without numbers, refer to those with the same name in [REC] mode menu.



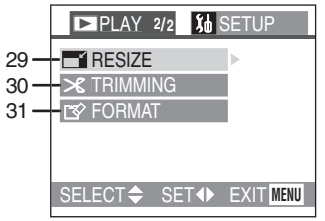
23 PICT.MODE (P32)

■ [PLAY] mode menu

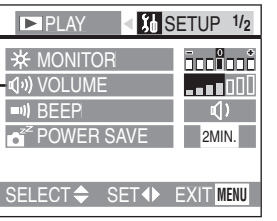
• For items without numbers, refer to those with the same name in [REC] mode menu.



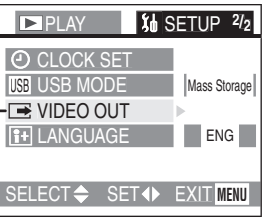
24 ROTATE (P75)
25 PROTECT (P81)
26 DPOF PRINT (P76)
27 SLIDE SHOW (P83)
28 AUDIO DUB. (P85)



29 RESIZE (P86)
30 TRIMMING (P88)
31 FORMAT (P90)



32 VOLUME (P24)



33 VIDEO OUT (P24, 91)

Cautions for Use

In the event of abnormal operation (e.g. if the unit emits smoke or an unusual smell), immediately stop operating the unit and consult the Panasonic Customer Care Centre on 132600.

■ Optimal Use of the Camera

Keep the camera away from magnetized equipment (such as a microwave oven, TV, video game equipment, etc.).

- If you use the camera on or near a TV, pictures and sounds may be disturbed due to electromagnetic wave radiation.
- Do not use the camera near a cell phone because doing so may cause noise to adversely affect the pictures and sounds.
- Recorded data may be damaged, or pictures may be distorted by strong magnetic fields created by speakers or large motors.
- Electromagnetic wave radiation generated by a microprocessor may adversely affect the camera, causing the disturbance of pictures and sounds.
- If the camera is affected by magnetically charged equipment and does not function properly, turn the camera off and remove the battery or disconnect AC adaptor and then insert the battery or connect AC adaptor again. Thereafter, turn the camera on.

Do not use the camera near radio transmitters or high-voltage lines.

- If you record near radio transmitters or high-voltage lines, recorded pictures or sounds may be adversely affected.

Do not spray insecticides or volatile chemicals onto the camera.

- If the camera is sprayed with such chemicals, the camera body may be damaged and the surface finish may peel off.
- Do not keep rubber or plastic products in contact with the camera for a long period of time.

When you use the camera on a rainy or snowy day or on a beach or similar place, do not let grit, fine dust or seawater get into the camera.

- Grit or dust may damage the camera or card. (Care should be taken when inserting and removing the card.)
- If seawater splashes onto the camera, wet a soft cloth with tap water, wring it well, and use it to wipe the camera body carefully. Then, wipe it again thoroughly with a soft, dry cloth.

When carrying this camera, take care not to drop or hit it.

- The outer case may be destroyed by the strong shock, and it may cause malfunction of this camera.
- For storing or transporting the camera, place it in a bag or case lined with soft pads to prevent the coating on the camera body from being worn.

Do not use benzine, thinner or alcohol for cleaning the camera.

- Before cleaning the camera, remove the battery or disconnect the AC adaptor from the electrical outlet.
- The camera body may be deformed and the surface finish may peel off.
- Wipe the camera with a soft, dry cloth. To remove stubborn stains, wipe with a cloth that is soaked in a detergent diluted with water and afterward finish wiping with a dry cloth.

■ Condensation

When using the camera outdoors during very cold weather, condensation can form on the camera and lens when you return to a warm place.

When condensation has taken place: Turn the camera off and leave the camera in this condition for about 2 hours. When the camera becomes close to the ambient temperature, the condensation disappears naturally.

■ Optimal Use of the Battery

The battery is a rechargeable lithium ion battery. Its ability to generate power is based upon the chemical reaction that takes place inside it. This reaction is susceptible to the surrounding temperature and humidity, and, if the temperature is too high or too low, the operating time of the battery will be shorter.

If you drop the battery accidentally, check to see if the battery body and terminals are deformed.
Inserting a deformed battery to the camera may damage the camera.

Be sure to remove the battery after use.
If it is left inserted to the camera, a minute amount of current is consumed even when the camera is turned off. If the battery is left inserted in the camera for a long time, discharge takes place. The battery may become unusable even after it is charged.

Dispose of an unusable battery.
- The battery has a limited life.
- Do not throw the battery into fire because it may cause an explosion.

■ Cautions for Storage

Before storing the camera, remove the card and the battery.
Store all the components in a dry place with a relatively stable temperature.
(Recommended temperature:
15°C to 25°C,
Recommended humidity: 40% to 60%)

Battery
- Do not leave the camera and the battery at the place where the temperature is too high, such as inside a car during the summer.
- Extremely high or low temperatures will shorten the life of the battery.
- If the battery is kept in smoky or dusty places, the terminals may rust and cause malfunctions.
- Do not allow the battery terminals to come in contact with metal objects (such as necklaces, hairpins, etc.). This can result in a short circuit or heat generation and, if you touch the battery in this condition, you may be badly burned.
- Store the battery in a completely discharged state. To store the battery for a long period of time, we recommend charging it once every year and storing it again after you completely use up the charged capacity.

Card

- Do not leave the card in places where there is high temperature or direct sunlight, or where electromagnetic waves or static electricity are easily generated.
- Do not bend or drop the card. The card or the recorded content may be damaged.
- After use, be sure to remove the card from the camera.
- Do not touch the terminals on the back of the card with your fingers. Do not allow dirt, dust or water to enter it.

AC adaptor

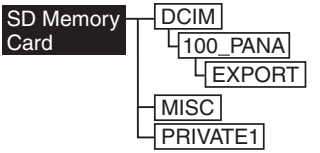
- If you use the AC adaptor near a radio, radio reception may be disturbed. Keep the AC adaptor 1 m or more away from radio.
- When the AC adaptor is in use, it may generate whirring sounds. However, this is not a malfunction.
- After use, be sure to disconnect the AC cable. (If it is left connected, a minute amount of current is consumed.)
- Keep the terminal of the AC adaptor and battery clean.

■ LCD monitor

- In a place with drastic temperature changes, condensation may form on the LCD monitor. Wipe it with a soft, dry cloth.
- If the camera is extremely cold when you turn the camera on, the image on the LCD monitor is slightly darker than usual at first. However, as the internal temperature increases, it goes back to the normal brightness.

■ Folder Composition

When a Memory Card with data recorded on it is inserted into a PC, the folders shown below will appear.



- In the [100_PANA] folder it is possible to record up to 999 pictures.
- In the [MISC] folder it is possible to record the files that have been set with DPOF settings.
- The files recorded in flip animation function are stored in [PRIVATE1] folder.
- The motion images created by flip animation function are store in [100_PANA] or other folder.

■ Printing pictures recorded with HDTV mode

When you print pictures recorded by setting the picture size to [HDTV] (1920×1080 pixels), both ends of the pictures may be cut out.

To print pictures with ends:

When you order photo studios to print pictures:

- Ask the photo studio if the pictures can be printed with both ends.

When you print pictures with your printer:

- When using the printer with a trimming feature or a feature which cuts out both edges of the pictures, cancel the feature for printing.
- The feature depends on the printer used. Refer to the operating instructions of the printer for details.

Approximate number of recordable pictures and the size

Picture size	2304×1728 (DMC-FX5)		2048×1536 (DMC-FX1)		1600×1200		1280×960	
Quality								
16 MB	8	16	10	20	17	34	22	43
32 MB	17	34	22	43	36	72	47	90
64 MB	35	70	45	88	74	149	96	184
128 MB	72	142	91	178	150	301	195	372
256 MB	144	283	181	354	300	600	390	743
512 MB	291	571	365	714	604	1209	785	1497

Picture size	640×480		1920×1080 (HDTV)	
Quality				
16 MB	69	129	17	34
32 MB	145	270	36	72
64 MB	298	553	74	149
128 MB	602	1118	150	301
256 MB	1200	2229	300	600
512 MB	2418	4491	604	1209

- If you mix fine quality and standard quality, the number of recordable pictures changes.

Message Display

[NO MEMORY CARD]
Insert the card.

[THIS MEMORY CARD IS PROTECTED]
Cancel the card lock.

[NO VALID IMAGE TO PLAY]
Play back after recording or after inserting the card with a recorded picture.

[MEMORY CARD FULL]/ [NOT ENOUGH MEMORY IN THE CARD]
Insert a new card or delete the unnecessary data.

[MODE DIAL IS NOT IN THE PROPER POSITION]
This message appears when you turn the camera on with the mode dial in the wrong position.
Rotate the mode dial to the proper position.

[PLEASE SET THE CLOCK]
This message appears when you use the camera for the first time or you do not use the camera for a long time.
Set the clock.

[THIS PICTURE IS PROTECTED]
After cancelling the protect setting, you can delete or overwrite the picture.

[THIS PICTURE CAN'T BE DELETED]/[SOME PICTURES CAN'T BE DELETED]
The pictures not based on the DCF standard cannot be deleted.

[CAN'T BE SET ON THIS PICTURE]/ [CAN'T BE SET ON SOME PICTURES]
If the pictures are not based on the DCF standard, the DPOF print cannot be set.

[NO ADDITIONAL DELETE SELECTIONS CAN BE MADE]
You have exceeded the number of pictures that can be set at once with multi-delete setting.

[MEMORY CARD ERROR FORMAT THIS CARD?]
The format of the card cannot be recognized by this camera. Format the card again with this camera.

[SYSTEM ERROR]
This message appears when the camera does not operate properly. Turn the camera off and on. If the message persists, contact the dealer or your nearest servicentre.

[MEMORY CARD ERROR]
Failed access to the card.
Insert the card again.

[READ ERROR]
Data reading error.
Play it back again.

[WRITE ERROR]
Data writing error.
Turn the camera off and remove the card. Then insert the card and turn the camera on again. Be sure that the camera is turned off before removing or inserting the card to avoid damage.

Troubleshooting

1: The camera is not turned on.

1-1: Are the battery inserted or the AC adaptor correctly connected? Check the connection.

1-2: Is the battery sufficiently charged? Use the battery that has been sufficiently charged.

2: As the camera is turned on, it turns off immediately.

2: Is the battery charge insufficient to operate the camera? Use the battery with charged one.

3: The brightness of the screen changes dark or bright for a moment.

3: This phenomenon appears when pressing the shutter button halfway to set the aperture value and does not affect the recorded pictures.

4: The picture cannot be recorded.

4-1: Is the card inserted?

4-2: Is the mode dial correctly set? Check it.

4-3: There is no memory capacity left on the card. Before recording, delete some pictures.

5: The picture is not displayed on the LCD monitor.

5: Is the LCD monitor set to OFF? Press the [DISPLAY] button several times to switch to LCD monitor display.

6: The screen is too bright or dark.

6: Adjust the brightness of the screen.

7: Flash is not activated.

7: The flash mode is set to forced OFF. Change the flash mode.

8: Unreadable language was selected by mistake.

8: Select [ ] icon on the [SETUP] menu to set the desired language.

9: The subject is not focused properly.

9-1: The focus range depends on the recording mode. Set the mode dial to the mode corresponding to the distance to the subject.

9-2: Set the [AF TRIGGER] to [SHUTTER].

10: The picture is not played back.

10-1: Is the card inserted?

10-2: Is there a picture in the card?

10-3: Is the mode dial set to playback [ ]?

11: The picture does not appear on the television.

11-1: Is the camera connected to the TV correctly?
Check it.

11-2: Set the TV to video input mode.

12: When connecting to a PC, pictures cannot be transferred.

12-1: Is the camera connected to the PC correctly?
Check it.

12-2: Is the camera recognized by the PC correctly?

12-3: Is the USB mode set correctly?

13: The clock setting is reset.

13-1: If you do not use the camera for a long time, the clock setting may be reset. When the message [PLEASE SET THE CLOCK] appears, set the clock again.

13-2: When you take a picture before setting the clock, [0:00 0. 0. 0] is recorded.

14: Some pixels are inactive or always lit on the LCD monitor.

14: This is not a malfunction. These pixels do not affect the recorded pictures.

15: The pictures cannot be printed with printers supporting USB Direct-Print or PictBridge.

15: Is the USB mode set correctly?

Specifications

Digital Camera Information for your safety

Power Source:	DC 4.7 V
Power Consumption:	2.2 W (When recording with LCD Monitor to on) 1.0 W (When recording with LCD Monitor to off) 1.3 W (When playing back with LCD monitor)

Camera Effective pixels	4,000,000 pixels (DMC-FX5) 3,200,000 pixels (DMC-FX1)
Image sensor	1/2.5 inch CCD Total pixel number 4,230,000 pixels (DMC-FX5) Total pixel number 3,340,000 pixels (DMC-FX1) Primary colour filter
Lens	Optical 3× zoom, f=5.8 – 17.4 mm (35 mm film camera equivalent: 35 – 105 mm)/F2.8 – 4.9
Digital zoom	Max. 3×
Focus	TTL Auto/Macro Spot AF (Spot mode)
Focus range	50 cm – ∞, Macro/Simple mode: 10 cm (Wide)/30 cm (Tele) – ∞
Shutter system	Electronic shutter+Mechanical shutter
Burst recording	4 frames/second (high speed), 2 frames/second (low speed) Max. 7 frames (standard)/Max. 5 frames (fine) (DMC-FX5) Max. 8 frames (standard)/Max. 5 frames (fine) (DMC-FX1) (Performance is only with SD Memory Card. MultiMediaCard performance will be less.)
Motion image recording	320×240 pixels (30 or 10 frames/second with audio. The maximum recording time depends on the capacity of the card.)
ISO sensitivity	AUTO (without flash: from ISO50 to 200/ with flash: from ISO100 to 200)/50/100/200 (DMC-FX5) AUTO (without flash: from ISO50 to 200/ with flash: from ISO100 to 200)/50/100/200/400 (DMC-FX1)
Shutter speed	8 – 1/2,000th Motion image mode: 1/30th – 1/2,000th
White balance	AUTO/Daylight/Cloudy/Halogen/White set
Exposure (AE)	Programme AE Exposure compensation (1/3 EV Step, −2 – +2 EV)
Metering mode	Multi/Spot (Spot mode)
LCD monitor	1.5 inch low-temperature polycrystalline TFT LCD (114,000 pixels) (field of view ratio about 100%)
Optical finder	Real-image zoom finder

Flash	Flash range: (ISO200/AUTO) Approx. 40 cm – 3.3 m (Wide)/ Approx. 40 cm – 2 m (Tele) AUTO, AUTO/Red-eye reduction, Forced ON, Slow sync./Red-eye reduction, Forced OFF
Microphone	Monaural
Speaker	Monaural
Recording media	SD Memory Card/MultiMediaCard
Picture size	2304×1728 pixels, 1600×1200 pixels, 1280×960 pixels, 640×480 pixels, 1920×1080 pixels (Still picture) (DMC-FX5) 2048×1536 pixels, 1600×1200 pixels, 1280×960 pixels, 640×480 pixels, 1920×1080 pixels (Still picture) (DMC-FX1) 320×240 pixels (Motion image)
Quality	Fine/Standard
Recording file format	
Still Picture	JPEG (Design rule for Camera File system, based on Exif 2.2 standard), DPOF corresponding
Picture with audio	JPEG (Design rule for Camera File system, based on Exif 2.2 standard)+640×480 pixels QuickTime (picture with audio)
Motion images	QuickTime Motion JPEG (motion images with audio)
Interface	
Digital	USB 1.1
Analogue video/audio	NTSC/PAL Composite/Audio line output (monaural)
Terminal	
DIGITAL/AV OUT	Dedicated jack (8 pin)
DC IN/EXT.	Dedicated jack (14 pin)
Dimensions (W×H×D)	107.7×50.9×27.4 mm (excluding the projection part)
Weight	Approx. 165 g (excluding Memory Card and battery) Approx. 185 g (with Memory Card and battery)
Operating Temperature	0°C – 40°C
Operating Humidity	10% – 80%

Battery Charger/AC Adaptor
(Panasonic DE-929B) Information for your safety

Input	110 – 240 V ~ 50/60 Hz, 0.22 A
Output	DIGITAL CAMERA 4.7 V ⎓ 1.5 A CHARGE 4.2 V ⎓ 0.65 A

Battery Pack (lithium-ion)
(Panasonic CGA-S001E) Information for your safety

Voltage/capacity	3.6 V, 680 mAh

MEMO

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Web Site: http://www.panasonic.co.jp/global/